

# **NEW ENERGY TIMES**<sup>TM</sup> Jan. 10, 2005 -- Issue #8

*Your best source for cold fusion news and information.*

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## **Table of Contents:**

- [1. From the Editor](#)
- [2. To the Editor](#)
- [3. Why is Energy Important?](#)
- [4. Why is Cold Fusion Important?](#)
- [5. Who Should Care About Cold Fusion Research?](#)
- [6. Will Cold Fusion Ever Be Practical, and If So When?](#)
- [7. What is the State of Cold Fusion Research Funding?](#)
- [8. What Can You Do to Support Progress in Cold Fusion Research?](#)
- [9. International Conference on Cold Fusion-\(ICCF-11\) Review by Steven B. Krivit](#)
- [10. ICCF-11 Trip Report from Jim Corey of Sandia National Laboratories](#)
- [11. Comments about ICCF-11 by Joaquín Pérez-Pariente](#)
- [12. ICCF-12 Conference Announcement](#)
- [13. Review of 12th Annual Russian Cold Fusion Conference](#)
- [14. 6th Annual Meeting of Japan CF Research Society Announced](#)
- [15. 2004 Department of Energy Cold Fusion Review](#)
- [16. George Milev Receives Award From American Nuclear Society](#)
- [17. 3 Japanese Cold Fusion Researchers Win Thermal and Electronic Energy Technology Awards](#)
- [18. Japanese Financial Times Ranks MHI Transmutation No. 3 in Advanced Technological Innovation](#)
- [19. 2004 New Energy Times Ostrich Award](#)
- [20. Cold Fusion in the Courts: John Dash Makes His Case](#)
- [21. Murder Investigation of Eugene Mallove](#)
- [22. Jed Rothwell Writes \(Free\) E-Book on Cold Fusion](#)
- [23. "Pathological Skepticism" by Professor Bill Beaty](#)
- [24. Hot Fusion Bubbles in Impulse Devices' Ultrasonic Sphere](#)
- [25. Cold Fusion in the News](#)
- [26. Speakers Available - Experts on the Subject of Cold Fusion](#)
- [27. Recent Updates to the New Energy Times \(tm\) Web Site](#)
- [28. Support New Energy Times \(tm\)](#)
- [29. Administrative](#)

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## **1. From the Editor**

Welcome!

Readers of this issue of New Energy Times may notice that it is an order of magnitude larger than our previous issues. The reasons are fairly simple. Several cold fusion conferences have occurred recently or are about to occur. Also the highly anticipated 2004 Department of Energy Cold Fusion Review concluded in December. This issue of

New Energy Times is chock full of news and information, so grab a full cup of coffee and find your most comfortable chair. Because of the unusual size of this special issue, we are making this edition available in three formats:

- 1) E-mail without images
- 2) Full version on the Web: <http://www.newenergytimes.com/news/8.htm>  
(Note, if the images don't load properly from the Web, try the following: a) refresh your browser window or b) try Mozilla Firefox or c) download the PDF version.)
- 3) Full version in PDF: <http://www.newenergytimes.com/news/8.pdf>

Just so you know our intentions, we don't aim to produce this newsletter to fit any pre-determined size. Our goal is merely to report the news and information which we feel is relevant to this topic and do it in a timely manner. Because the newsletter will be reaching a significantly larger audience this time, we have included some basic information about cold fusion which some of you old-timers know well.

I'll be on 21st Century Radio with Dr. Bob Hieronimus Sunday Jan. 16 at 8 pm EST/USA time for those who are interested. If you are in the Baltimore area, you can listen in on WCBM 680 AM. The show is also streamed over the Web; you can visit <http://www.21stcenturyradio.com/> for instructions.

We appreciate your interest and we look forward to bringing you our next issue within a month or two or as news breaks. Newsletters normally go out to subscribers via e-mail, so if you'd like to receive future editions, [click here](#) to subscribe. It's free, and your e-mail address is confidential and will never be sold or shared.

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<http://newenergytimes.com/paypal donate.htm>

Steven B. Krivit  
Senior Editor, New Energy Times

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## 2. To the Editor

The orthodox nuclear physics community has hijacked the energy policy of America. Most Americans probably assume that these physicists are doing what is best for America. But what is best for America and what is best for these physicists may be totally different; they will choose a path beneficial to them regardless of any potential negative impact on Americans. The biggest losers in the cold fusion controversy will be these physicists. They stand to lose billions of dollars of wealth, power and prestige if cold fusion is right; thus, they have absolutely no reason to speak in favor of it and billions of reasons not to. Overnight, they will become dinosaurs, and dinosaurs don't get funding. These physicists also run the risk of winding up in prison. Hundreds of physicists have been involved in conspiracy, fraud and restraint of trade. The third charge is easy to substantiate. These physicists have used their cartel power to suppress a competing technology. That is restraint of trade. I recommend that cold fusion researchers band together and bring a class action against MIT and other universities

which bungled the early cold fusion research. Sue them for \$100 million dollars in damages. It should be emphasized that what they have done is not merely unethical but also illegal.

One of the misconceptions fostered by these physicists with respect to hot fusion is that the fuel is cheap and inexhaustible. That may be true of deuterium, but it is not true of tritium. On an ounce-for-ounce basis, tritium costs as much as gem-quality diamonds. So these physicists would have you believe that burning a bucket of diamonds in hot fusion reactors is cheap.

Richard Moody Jr.  
Berne, N.Y.

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### **3. Why is Energy Important?**

Energy, like the air we breathe and the food we eat, is an essential part of daily survival. Every aspect of life depends on energy, from the heat in our homes, to the irrigation of our crops, to the manufacture of every product in every store. Regardless of which country we live in, energy is a precious and essential commodity.

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### **4. Why is Cold Fusion Important?**

Cold fusion could fulfill the entire world's energy needs, using ocean water as fuel, without harming the environment.

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### **5. Who Should Care About Cold Fusion Research?**

*Anyone who cares about the environment, safety and public health.*

Cold fusion shows clear signs of being an energy source that is clean and safe; it produces helium as its byproduct. Helium is harmless to humans and the environment. Unlike fossil fuels or conventional nuclear power, cold fusion does not contribute to local air pollution, global warming or nuclear waste. Cold fusion may have the capacity to clean up nuclear waste from last century's nuclear fission reactors by changing radioactive waste materials into nonradioactive materials.

*Anyone who cares about people in Third World countries: people who don't have enough food to eat and fresh water to drink.*

Cold fusion would provide a plentiful source of energy. This energy can be used to purify ocean water into drinking water. And this water can then be transported to barren lands to irrigate crops. This can help solve two of humankind's most urgent problems: hunger and thirst.

*Anyone who has children or grandchildren or is a young adult and is concerned about the depletion of oil in the coming decades.*

Experts tell us that oil will become increasingly scarce within a few decades. They also tell us that the world's energy demands continue to grow. A collision course is

inevitable a major replacement for oil is found. Cold fusion has the potential to provide an alternative to oil and to supply the energy needs of the entire world from ocean water, virtually indefinitely.

*Anyone who wants to see greater energy independence for his or her country.*

To some people, this may mean lower fuel prices. To others, it may mean less of a need to insure the stability of oil-rich regions, like Iraq.

*Anyone who is involved in the aerospace industry.*

Cold fusion could be the ideal energy source for space travel: safe, compact and very high energy density.

*Anyone who is invested in or considering investing in the petroleum industry.*

As mentioned in The New York Times (Jan. 9, 2005), "The demand for oil could be hurt in an instant - for example, if someone invented a portable cold fusion generator that could safely power a car or heat a house."

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## **6. Will Cold Fusion Ever Be Practical, and If So, When?**

Cold fusion is in the pure science stage. Before we can use cold fusion, numerous steps must occur. The most important of these steps is to fully understand the underlying science. Once the science is understood, engineering research can develop the phenomenon into practical applications.

Many cold fusion researchers can easily generate one watt of excess energy with the electrolytic method. This and other methods have shown power levels in the tens of watts in numerous experiments. While one watt may sound trivial, it is still considered revolutionary, heretical, and theoretically impossible, according to experts in hot fusion. Some cold fusion experts state that early applications may be five to 10 years away and that this is highly dependent on research funding. Some researchers believe that the necessary breakthroughs may take 50 years or that they could happen tomorrow.

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## **7. What Is the State of Cold Fusion Research Funding?**

Sadly, there is no official program to fund cold fusion research in many countries. The simple explanation for this is that a majority of scientists consider the entire field of cold fusion to be pathological science. Only France, Italy and China are believed to have government-funded cold fusion research programs.

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## **8. What Can You Do to Support Progress in Cold Fusion Research?**

- Tell your government representatives that you want your energy departments to investigate cold fusion instead of waiting for the critics and opponents to change their minds. The U.S. government made a serious scientific effort to develop the atomic bomb, and to put a man on the moon. Surely it and others can make a serious effort to investigate a possible solution to the forthcoming energy crisis.

- Talk with university and college professors to stimulate meaningful discussions and debate on cold fusion, hot fusion, or any other possible solution to the forthcoming energy crisis. Most critics of cold fusion have based their opinions on data that is both out of date and wrong.
- Contact science correspondents in the media and encourage them to look into the subject, ask hard questions and take a fresh look at the facts.
- Debate the facts and challenge the myths of cold fusion in science classes and debate tournaments.
- Speak with your friends and family about energy issues. Teach others that there may be a clean form of nuclear energy.

***Ask the Important Questions:***

- What is the significance of the world's declining petroleum resources?
- What is the significance of the increasing energy demand worldwide?
- Who is likely to occur when these two factors collide?
- What are the proven answers to this forthcoming crisis?
- Has hot fusion proven to be any more commercially viable than cold fusion so far?
- Can the world afford to ignore a possible solution to the forthcoming energy crisis?

***Get the facts... Get the books:***

*The Rebirth of Cold Fusion: Real Science, Real Hope, Real Energy*  
 Krivit & Winocur, (2005) ISBN 0976054582

[www.newenergytimes.com](http://www.newenergytimes.com)

*Excess Heat & Why Cold Fusion Research Prevailed, 2<sup>nd</sup> Ed.*

Beaudette (2002) ISBN 0967854830

[www.infinite-energy.com](http://www.infinite-energy.com)

***Important Web Sites:***

LENR-CANR Online Cold Fusion Research Library, by Jed Rothwell and Edmund Storms

[www.lenr-canr.org](http://www.lenr-canr.org)

International Society for Condensed Matter Nuclear Science

[www.iscmns.org](http://www.iscmns.org)

Collaborative Energy Research Group

<http://www.cerg.org>

Association for the Study of Peak Oil, founded by Colin Campbell

[www.peakoil.net](http://www.peakoil.net)

Deutsche Bank Research Report, "Energy Prospects After the Petroleum Age"

<http://www.odac-info.org/bulletin/documents/DeutscheBankresearch.pdf>

**9. International Conference on Cold Fusion-11 Review by Steven B. Krivit**

The annual international cold fusion conference took place October 30 - November 5, 2004, in the south of France, in the heart of the port city of Marseilles.

While the conference retained its legacy acronym, ICCF (International Conference on Cold Fusion), the official name is now the International Conference on Condensed Matter

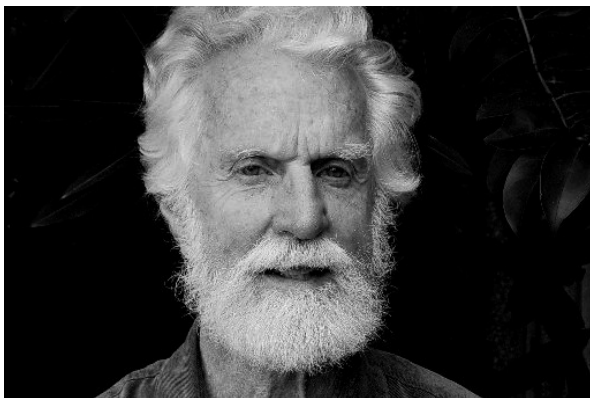
Nuclear Science. CMNS was formally adopted two years ago by the ICCF International Advisory Committee.

The term “cold fusion” is a poor representation of the very broad range of reactions seen in the field. Beyond the well-documented fusion reactions, CMNS shows a host of other novel and equally stunning reactions. The common element among the various effects, with rare exception, is reactions which occur in the presence of a host metal and deuterium or hydrogen. The term “condensed matter” distinguishes this subject from hot fusion, which causes reactions to occur in the free space of a gas plasma or, in the case of bubble fusion, in a liquid without a metal host. Regardless of the new term CMNS, the term “cold fusion” will almost certainly remain in use as a popular way to identify the field.

Another example of the distinction of condensed matter is shown in the work of Roger Stringham of First Gate Energies, Hawaii, USA. Stringham uses acoustic cavitation (ultrasonic waves to create gas bubbles) to create sonofusion with heavy water at the surface of a metal foil. This is one of the more unusual and challenging methods of cold fusion. Despite the unusual configuration, it is considered cold fusion for four reasons:

- a) The reaction temperature is far less than the millions of degrees required for hot fusion.
- b) The experimental configuration relies on a host metal rather than a gas plasma.
- c) The fuel is deuterium in the form of heavy water, not tritium and not a form of acetone.
- d) It generates heat but without deadly neutron radiation.

Stringham reported his best results as 40 watts of excess heat from 15 watts of acoustic input. He states that "the duration of the experiments varies from 25 to 600 minutes, with the expectation that any experiment could last indefinitely (a month surely and a year probably)." Interestingly, he says that the generated heat can be a problem in keeping the reaction going. "As long as we remove heat quickly, the system will continue to work," Stringham says. He recently collaborated with a cold fusion research laboratory in Mountain View, Calif., which performed a successful replication of the excess heat production. The Mountain View lab is not convinced of their result and is in the process of performing a second experiment.



**Roger Stringham of First Gate Energies, Hawaii, USA**

The 2004 cold fusion conference was organized by Professor Jean Paul Biberian, a physicist with the University of Marseilles-Luminy who studies cold fusion and has performed cold fusion research while working with the French Atomic Energy Commission.



**Jean Paul Biberian, University of Marseilles-Luminy, France**

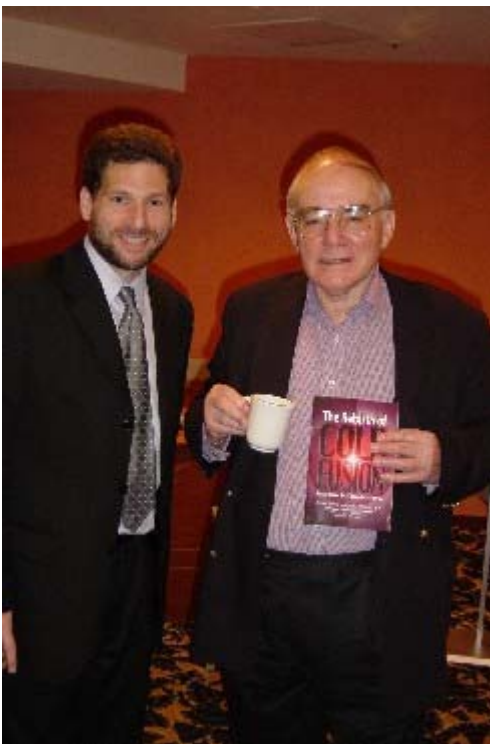
165 people from 21 countries and five continents attended the conference. The majority were researchers or research program managers. A handful of journalists and businesspeople made up the balance of attendees. There were many excellent presentations, though a few seemed to be unrelated to CMNS. While English was the official language of the conference, strong accents by some of the presenters rendered a few presentations unintelligible for those not intimately familiar with the particular presenter's topics.

Generally, the ICCF group is quite tolerant of unusual subject matter, and occasionally, some rather obscure proposals and conjecture showed up in the daily presentations. There was one presentation that seemed outright suspicious, and the remainder of the attendees summarily and politely ignored these presenters. As one attendee commented, "some of the subject matter, if presented at an American Physical Society meeting, would be intolerable." The ICCF group is willing to include questionable new topics, even if it later learns that such topics are unsubstantiated, rather than exclude a new topic and risk the loss of a significant new insight into science. This, of course, is the larger context in which cold fusion research has continued despite its ostracism from mainstream science. The choice to be inclusive of others' viewpoints is a credit to the courage and tolerance of this group. One expects to hear new ideas here.

The grandfather of the field, Martin Fleischmann, once again graced the conference with his presence. He was sometimes inspirational and other times bitter. And no wonder. At 77, he is unlikely to set up a new laboratory and return to experimental research, even if the field were to regain credibility quickly. This is a man whose greatest joy in life was

discovery, not even discovery of cold fusion per se but discovery of all things new and groundbreaking in electrochemistry. Since 1989, when he and his former partner, Stanley Pons, brought cold fusion to the world, they have been treated like outcasts from academic research. Charles Beaudette's poignant final comments from "*Excess Heat*" comes to mind: "One can only wonder why discovery seems to be so punished. Why, so often, must the next Columbus be brought home in chains?"

Despite his disappointment that some earlier cold fusion research, such as that of Preparata, was being ignored, he was still willing to pose for a photo with the author of the latest book on cold fusion. He rarely smiles but does so on occasion when sharing laughs and stories with old friends at the conference. He complains about his health but rebuffs further inquiry. Perhaps he disdains sympathy; perhaps he wants his privacy.



**Steven Krivit and Martin Fleischmann**

Photo by Frank Gordon

Stanley Pons lives near Marseilles, but he does not come to the cold fusion conferences any longer, and this year was no exception. However, after numerous attempts over a period of many months, I succeeded in making arrangements to meet him. I enjoyed a quiet dinner rendezvous with Stan and his wife, Sheila, in a quiet back-street restaurant in Marseilles. After dinner, and after much coaxing, I was able to get him to pose with me while Sheila snapped a photo. To my surprise, Sheila had to go to great lengths to coax a smile out of Stan. Sadly, cold fusion doesn't bring back good memories for him.



**Steven Krivit and Stanley Pons**

Photo by Sheila Pons

Stan generally does not talk with the media anymore but was gracious enough to make an exception for me. He has found a place in a local college teaching chemistry and recently wrote an 800-page textbook on mathematics for chemistry. He still bears the scars of the frenzied 1989 cold fusion episode and he has found that when he publishes papers these days, he must use a pseudonym. Otherwise his name invokes prejudicial responses from reviewers. Unlike Fleischmann, Pons wants nothing more to do with cold fusion, and his reluctance to talk about the old days is apparent. He misses nothing from his previous life as a cold fusion researcher and is quite content to have left it all behind, including billion-dollar offers to work for some of the wealthiest industrialists in the world.

One thing that Fleischmann and Pons still share, sadly, is anger toward each other. In the mid 1990s they worked in a custom-built laboratory in the south of France which was sponsored by the Toyota family. Exactly what happened that brought on their parting is unclear. Martin's story says one thing; Stan's story says another. Considering the hardships that both lived through, perhaps the schism is not surprising. The general sense I got of their break-up was that it was related to differences of opinion with regard to the direction of the research at the Toyota-sponsored IMRA laboratory.

During the ICCF conference, I had the opportunity to sit in on one of several leadership meetings. I was surprised at the community's informality and disorganization and at the lack of clear leadership. Despite these shortcomings, these few hundred scientists seem pull together an effective meeting every year. They exchange news of their work and offer their results and theories to their peers for consideration and critique. Some hope to entice wealthy speculators looking for the next gold rush.

There were a number of registrants at ICCF-11 who were not presenters or journalists, or affiliated with research organizations. Perhaps they were hoping to find the next Tesla or Edison?

Once a year, a so-called International Advisory Committee meets during the ICCF conference for one evening. The sole purpose of this 16-member representative body of

scientists from five nations is to decide the venue for the next years' conference. Traditionally, the conference rotates among the North American, European and Asian continents. Often the deliberations take hours. This year's conference broke the traditional rotation. To the surprise of few, Japan was selected as the host nation for the ICCF-12 conference, to be held in late 2005. Akito Takahashi volunteered to coordinate the conference. (See detailed announcement later in this newsletter.)



**Akito Takahashi, Osaka University (retired)**

The next conference after ICCF-12 would normally have taken place in North America. Because of the strong interest from Russian scientists, and the financial barriers for them to travel, they received support from the committee to host ICCF-13 in Russia. Anri Rukhyadze, of the Lebedev Physics Institute of Moscow, Russia, volunteered to coordinate the 2006 ICCF-13.



**Anri Rukhyadze, Lebedev Physics Institute**

The keynote speaker for the ICCF-11 conference was Professor Brian Josephson, a 1973 Nobel prize winner in physics. Josephson gave a talk on “Good and Bad Ways of Doing Science.” He has taken a keen interest in bringing the distinction between honest skepticism and pathological skepticism to the public’s attention in recent years. He has found that many critics of cold fusion demonstrate scientific skepticism run amok.

Wanting some of the spotlight for themselves, the City of Marseilles decided to express its appreciation to Fleischmann and Josephson by naming them Honored Guests of the city. A delicate international and scientific faux pas was narrowly averted before the finalized ceremonial details. Josephson had been offered a gold medal of the city. He declined however, most honorably, when he learned that it was to be offered to him alone, and not to Fleischmann and Pons, as well. After all, the event was about cold fusion, not about the Josephson junction.



**City of Marseilles Honors Fleischmann and Josephson as Guests of Honor**  
(From left: Jean Paul Biberian, Brian Josephson, Martin Fleischmann, Deputy Mayor Daniel Hermann, French Physical Society President Guy Le Lay)



**An Admiring Audience at the City Hall of Marseilles Listens to the Honorees**

### **Mitsubishi Heavy Industries**

Mitsubishi Heavy Industries continued its very thorough work to demonstrate transmutation of heavy elements in a cell containing a palladium membrane and a multilayer substrate of various elements subjected to the diffusion of deuterium gas. Again, they have achieved 100 percent reproducibility with this type of experiment, as did researchers at Osaka University. The U.S. Naval Research Laboratory is quietly attempting a replication of the Mitsubishi work in an international collaboration with the Mitsubishi researchers. The leader of the MHI research is Dr. Yasuhiro Iwamura.



**Yasuhiro Iwamura, Mitsubishi Heavy Industries**

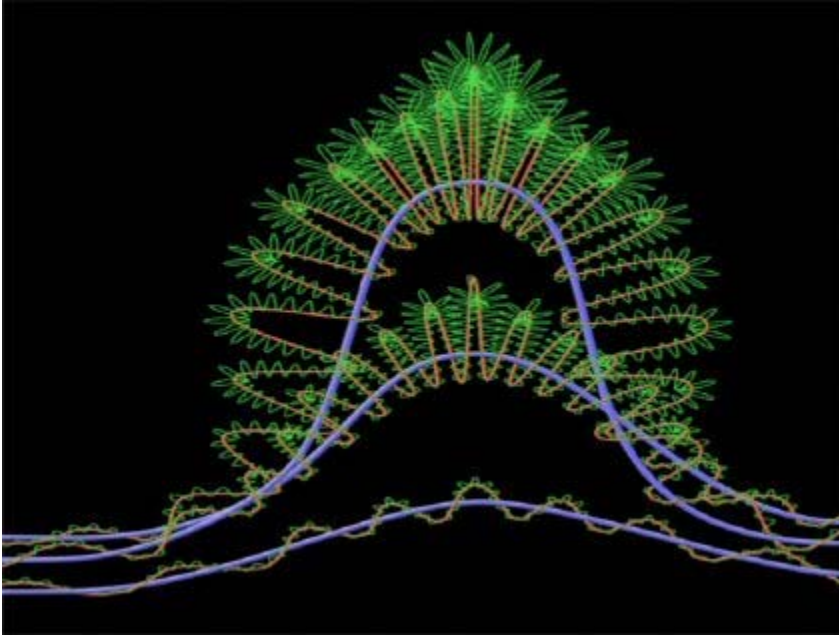
### **Energetics Technologies**

Two groups who are relatively new to the ICCF conference series gained a significant amount of attention from the cold fusion veterans. The first was the American-Israeli team of Energetics Technologies. The Energetics Technologies Ltd. laboratory is located in Israel and is a wholly owned subsidiary of Energetics Technologies LLC in the United States. The team has an interesting array of personnel. Herman Branover, an Israeli, is the lead scientist with apparently an impressive enough reputation that several scientists from other countries dropped what they were doing when Branover started the Energetics Technologies lab in Israel so they could work with him on this project. Irving Dardik is the other leader in this effort and is one of the owners of the company.



**Irving Dardik, Energetics Technologies**

Dardik's background is in medicine, and he brings an interesting theory to cold fusion research. He says that wave energy is the key to optimizing and initiating cold fusion reactions. Specifically, his theory describes waves within waves, nested, if you will. His concept is that, when electrical current is applied to cold fusion experiments and these wave oscillations are transmitted through the current into the cell, cold fusion reactions succeed. He calls these waves "Superwaves." Independent researchers have not assessed whether these waves are truly the key to Energetics Technologies' success. Energetics Technologies is not disclosing the full details of its research.



**Graphic Representation of Dardik's "Superwaves"**

Energetics Technologies presented data from its three best electrolytic cold fusion experiments at the conference:

- Run #56 gave 80% excess heat over a duration of 300 hours with a total excess energy of 3.1 Megajoules.
- Run #64a gave 2500% excess heat over a duration of 17 hours with a total excess energy of 1.1 Megajoules.
- Run #64b gave 1500% excess heat over a duration of 80 hours with a total excess energy of 4.6 Megajoules.

Ehud Greenspan of Energetics Technologies provided the following four points to summarize other key aspects of their claims:

1. Excess energy generated was more than 25 times higher than the input energy. The next highest excess energy reported in ICCF-11 was obtained by Roger Stringham.
2. The remarkable excess-energy to input-energy ratio reported by Energetics Technologies has been obtained at relatively high power levels of several tens of watts and lasted for tens of hours.
3. It is instructive to compare the excess-energy obtained by Energetics Technologies to that of Mizuno quoted by Jed Rothwell as a remarkable achievement -- 84 MJ from 100 g of Pd. These numbers correspond to a "specific excess-energy" of 0.84 MJ per gram of Pd. The specific excess-energy obtained in the Energetics Technologies experiments reported at the ICCF-11 was ~20 MJ/g, i.e., more than 20 times higher.
4. The highest "specific-power" obtained in Energetics Technologies experiments -- ~70 watts per gram of Pd, is higher than the average specific-power commercial fission reactors are operating at between 20 to 50 watts per gram of uranium.

Energetics Technologies is privately funded. Energetics Technologies and Mitsubishi may be the two most well-funded groups performing cold fusion research in the world. The angel investor behind the company is Sidney Kimmel, the billionaire head of Jones Apparel Group Inc. Ample funding has apparently been effective for Energetics Technologies.

The greatest challenge they face is reproducibility. Certainly, their claims of excess heat and energy appear to be among the highest ever seen in cold fusion experiments. The Holy Grail of clean nuclear power has not been obtained, however, because they have not seen high reproducibility with their work. If they can find a way to readily reproduce 2500% excess power, commercialization for electrical power generation is not far behind. But unlocking the secrets of nature to get to that point will not be an easy task.

The world is watching Energetics Technologies – and waiting. However enticing and exciting this may be, even if the company solves the reproducibility problem, its successes must be replicated in other laboratories to provide scientific validation. We look forward to seeing both met.

### **Institute for Atomic Physics of the Technical University of Berlin**

For the first time ever at an ICCF conference, researchers from Germany gave presentations on cold fusion research. Researchers Armin Huke, Konrad Czerkowski and P. Heide from the Institute for Atomic Physics of the Technical University of Berlin are not newcomers to cold fusion, however. They have been performing research quietly for nearly a decade but were reluctant to disclose their research until now, when they believed it was strong enough. Interestingly, they have proposed a new theory and are performing their own experiments based on their own theoretical work. It is unusual in the cold fusion research community to find both branches of research performed by a single research team, although the Energetics Technologies crew seems to have found this method to work, as well.



**Konrad Czerski, Technical University of Berlin**



**Armin Huke, Technical University of Berlin**

While it is still too early to make any judgments about the work of either the Israeli group or the German group, the following can be said for both groups: In question-and-answer sessions following each of their talks, the presenters were peppered with many questions from veteran cold fusion researchers. In every case the presenters were able to provide suitable answers and defense of their claims with remarkable ease. Considering the intense competitiveness among theorists, the reception and respect given to the German newcomers by a few of the other theorists were quite impressive. Further research, and replications by others, as always, will be the final judge of the Germans' work.

Attending ICCF for the first time this year was Nicholas Moller, a resident of Denmark. He is the founder and chairman of the Global Institute for New Energy Technologies (GIFNET), a Swiss nonprofit corporation whose mission is to establish programs to help bring about the use of benevolent energy technologies. Nicholas has been following the field of new energy for 13 years and has, until now, remained primarily in the background. He stated that he recently met with a very high-level individual at the United Nations who was eager to learn more about cold fusion. Nicholas brought a camera team to cover the conference. He says the documentary will air on BBC's "Earth Report" program to be broadcast in Europe as well as on National Chinese television. His Web site is [www.gifnet.org](http://www.gifnet.org)



**Fleischmann and Biberian Discuss Cold Fusion Demonstration Cell**

A Dash-type cold fusion demonstration cell was on display at the university. Biberian reported that it had shown some excess heat.



**Peter Hagelstein Receives Preparata Award from Francesco Celani**

### **ISCMNS**

The first annual meeting of the International Society of Condensed Matter Nuclear Science took place on Monday of the ICCF-11 conference. William Collis, who has organized many of the cold fusion conferences in Italy, spearheaded the effort. Akito Takahashi and Xing Zhong Li also contributed to the leadership of this very important organization. Its mission is to promote the understanding, development and application of condensed matter nuclear science for the benefit of its members and the wider community. Five nominees were submitted for four empty seats on the ISCMNS board; Edmund Storms, Jean Paul Biberian, Andrei Lipson and Steven Jones. All except Jones were elected. The Web site is <http://iscmns.org/>

The turnout at ICCF-11 included a large number of Americans and French. Perhaps half of the Americans were from small private companies, and many of the others were from various branches of the U.S. Navy. Two of the largest French government utilities, Electricity de France and the French Atomic Energy Commission, were represented at the conference by several dozen attendees. They came to listen and learn this year, not to present. France is a country that gets 80 percent of its electricity from nuclear power and seems to have a keen eye for the future. One nuclear physicist who works for the government explained that he is performing research on nuclear reactors which use thorium, rather than uranium. Apparently, there is only enough uranium to provide for 120 years of nuclear power. However, there is enough thorium to last for 8000 years. In addition to working on nuclear power generation for the last 25 years, the physicist also has worked on nuclear weapons programs. He made an interesting comment about cold

fusion. Even though this was his first exposure to the research, he said, "Its clear that it will work someday. It's inevitable. All new technologies start small like this."

One of these government agencies made it know that it is going to attempt to replicate the Arata (Japan) experiment to see the effect for itself. The Arata experiment is an excellent choice. It has shown extremely high power levels and has been replicated at least once by Mike McKubre and his staff at SRI International (USA). Yoshiaki Arata is one of the most highly regarded nuclear physicists in Japan. He was scheduled to attend ICCF-11 but was unable to make it at the last moment. He was called to receive an award from the emperor of Japan.

One of the French agencies apparently is getting help from Jean Louis Naudin. Naudin has been popularizing Mizuno's (Japan) experiment through his very flashy Web site. Naudin says that he gets thousand of hits on his Web site. That's not surprising. He has built a worldwide community through Internet chat lists of garage-tinkerers and hobbyists who have been trying their hand at cold fusion. Neither Naudin nor any of his fans seem to have published any papers or presented their research at conferences. Nevertheless, he apparently has made a success of himself, in that he arrived at the conference registered with one of the government laboratories.



**Tadahiko Mizuno, John Fisher, Jean Louis Naudin**

Papers at the ICCF-11 conference represented predominantly a search for nuclear evidence such as charged particles, neutron emissions and nuclear transmutations. While all this research has value, it circumvents the most significant aspect of the promise of cold fusion: the heat-generating energy effect. It is the excess heat which may be the pathway out of humankind's terminal dependency on fossil fuels and nuclear fission. The apparent low interest in inquiring into the excess heat phenomenon, and the necessary

research to scale up the excess heat effect, concerned some. Ed Storms admonished his peers to put more attention on excess heat studies. He surmised that many who focus their time elsewhere, in the search for evidence of nuclear ashes, are doing so primarily in their continued quest to prove their critics wrong. As Storms and others before him have pointed out, the most vocal opponents of cold fusion research may never admit that they were wrong and instead take their fixed beliefs with them to the grave.

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## **10. ICCF-11 Trip Report From Jim Corey of Sandia National Laboratories**

Jim has prepared a very thorough, 16-page report of his observations of the conference and the field. The full report is available here:

<http://newenergytimes.com/iccf11/ICCF11-2005-CoreyJim-TripReport.pdf>

The following excerpt is the conclusion from his report.

"I am not a scientist and, thus, am not able to judge the claims for LENR's in a scientific manner. Nevertheless, I have been following the field for several years because of its potential as an energy source. I know the researchers to be sincere and honest men, and the quality, the quantity, and the consistency of the descriptions of experimental results that I have seen have convinced me that this phenomenon is real. I have seen the criticisms of the field, including the recent DOE review, and it seems to me that many scientists avoid issues with their feelings of self-worth by not admitting that there could be any phenomena which cannot be explained by their own (complete, unshakeable, omniscient) knowledge of the physical world. And yet we now recognize quantum entanglement as real, but not well understood. We recognize the quantum vacuum as real and possibly exploitable, without a thorough understanding of it. We can stop a photon of light in the laboratory, and then let it go again. Revolutions in science do happen, and I believe we are in the middle of one. Is cold fusion real? I believe it is. Does it utilize conventional physics principles to work? I do not believe so. Some people want to believe there is nothing new under the sun. Not me. I like to think about new things, mysterious things. Come to the next International Conference on Cold Fusion in November 2005 in Kyoto, Japan. If you like new things, you'll have a ball."

[Editor's note: Jim Corey will be retiring today after 24 years at Sandia National Laboratories. He spent the last decade as a technology analyst and specialized in energy technologies in recent years. He will continue an association with Sandia Labs but has formed his own company called Research Institute of the Ozarks, in Missouri, as a vehicle for his consulting and research interests. His recent ICCF-11 trip report has been received with great appreciation and respect from researchers and progressive journalists around the world. Best of luck, Jim, and thank you!]

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## **11. Comments About ICCF-11 by Joaquín Pérez-Pariente**

ICCF-11 has been the first meeting devoted to what has been commonly named so far "Cold Fusion" I have ever attended. Prior that, I had superficial knowledge of this

scientific field, and therefore everything I heard and saw in Marseille was new to me. No surprise then if I have a good handful of ideas, observations, questions and comments about the several topics discussed in the conference. I wish to select just those two I believe will deserve deeper if not urgent consideration in near future.

The first one deals with the transmutations that have been reported by several research teams to take place in the course of a number of experiments devising to produce excess energy. I think many of these claims are controversial. For example, should the detection on the electrode surface of elements not previously seen there be always taken as a proof of transmutation? For a number of good reasons, I would uncritically and enthusiastically acknowledge the effective occurrence of such nuclear processes at mild conditions, were it not for, being a chemist, I am also aware of the role that chemical impurities have played along the history of chemistry. In my opinion, before accepting any claim on the real occurrence of element transmutations, it would necessary to perform a chemical mass balance of the whole system. In other words, a complete and detailed bulk chemical analysis of the materials present at the beginning of the experiment and after the experiment should be carried out.

A simple example taken from the conference will illustrate clearly this requirement. Several salts are used as electrolytes in electrochemical devices. The reported purity of these salts, sodium hydroxide or potassium carbonate, for example, is about 99.5 %. It means that every gram of salt will contain about 5 mg of impurities, most of them metal salts. The metals in the salts carry a positive charge, and it would be then reasonable to suppose that at least a portion of them could deposit on the cathode electrode. A simple calculation will show that just very few mg of metals deposited on the metal forming the cathode, which has a very small geometrical surface, will form a surface layer several microns thick. How reliable would be then the results obtained from surface techniques like XPS, or even from SEM-EDS? I haven't seen any report concerned with the full chemical composition of the electrolyte solution both before and after CF experiments. Similar considerations would apply when taken into account the composition of the cathode electrode itself. A number of papers report the use of cathode metals of 99.99% purity, even 99.9%, having weight of about 10 grams. In some cases, a portion of several grams of the electrode dissolves in the course of the experience, which means that several mg of metal impurities initially contained in the electrode are released to the electrolyte solution.

In my opinion, any quantification of the metals claimed to originate from nuclear transmutations should be weighted against any possible source of contamination. There are well-established analytical procedures to determined not just ppm, but ppb (parts per billion) of metals in solutions. I suggest these procedures should be systematically used in studies aiming to demonstrate that nuclear transmutations can take place at mild conditions. Indeed, decades before 1989 several claims on the occurrence of low energy transmutations can be tracked in the scientific literature. I will select just two. Nagaoka in Japan and Miethe in Germany reported in the twenties the transmutation of mercury into gold during electric discharges in vacuum tubes. The gold was later reported to proceed from adventitious impurities. In 1913 W. Ramsay reported the presence of helium in

vacuum tubes, which was showed to proceed from contamination. To conclude, there are some studies that meet the experimental approach I have outlined above, where the evidence on the actual occurrence of transmutations is fully convincing, but, unfortunately, this conclusion cannot be extended to most of the reports on this topic I have studied so far.

The second comment does not concern technical issues, but consists in a question which I believe it will become most relevant in coming years. Some CF studies, very few indeed, report the sporadic production of an enormous amount of energy in a short period of time, i.e., a high power is obtained. In some cases, the temperature raised to several hundred degrees, judging from the structural modifications observed in the electrodes. My question here is this: how high might this power be? If the temperature raised to several hundred degrees, why not to several thousand? Would it be possible to control this burst of energy, and to maintain it for a prolonged period of time? In my opinion, these questions touch the very ultimate goal of the CF research, and I am very much surprised they have not been properly addressed in the conference. I think this is the hidden side of CF research. We have, on one side, what we could call the “hot” procedure to liberate nuclear energy: if this is done in a controlled manner (uncontrolled sometimes) we have as a result the nuclear power plants. Deliberate uncontrolled procedures lead to the well-known nuclear weapons. On the other side we would have “cold” (until now) procedures to deal with the energy contained in the atomic nuclei, those described in current CF papers. Now, the first question could be reformulated this way: what do we have in between? Would it be possible to increase progressively the level of “heat”, from the CF side, in order to release an ever-increasing energy and power, approaching in this way the well-known and conventional procedures to deal with nuclear energy? Nobody could actually give a negative answer to this question, and the mere possibility of a positive answer would urge all of us to discuss openly this issue. Frankly speaking: would it ever be possible to conceive the construction of a weapon based, to speak in a simplified manner, in CF principles?

The foreword to a modern edition of an old alchemical treatise published nearly fifty years ago contained this comment: if the alchemists had discovered the way to fabricate a nuclear bomb in a kitchen furnace, then this knowledge should remain secret for ever. Have we unconsciously turned the oven on already?

-- Joaquín Pérez-Pariente was born in 1957 and received a Ph.D. in chemistry in 1984 from Universidad Complutense de Madrid (Spain). He joined Professor Jacobs' group at Leuven University in Belgium as a postdoctoral researcher (1984-86). He was appointed a tenured scientist at the Instituto de Catálisis y Petroleoquímica Consejo Superior de Investigaciones Científicas (CSIC, Scientific Council for Scientific Research) in 1986 and became research professor at the CSIC in 2001. He has contributed mainly in the field of synthesis, characterization and catalytic applications of zeolites and mesoporous materials. He is the president of the Spanish Zeolite Group. He has published 135 papers in international scientific journals and been awarded 20 patents.

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## **12. ICCF-12 Conference Announcement**

Written by Akito Takahashi

The IAC (International Advisory Committee) of ICCF11, held on 2nd November 2004 in Marseille, agreed to hold the 12th International Conference on Condensed Matter Nuclear Science (ICCF12) in Japan. The Local Organization Committee (LOC) is being organized with nominated Chairman Akito Takahashi (Osaka University), Co-chairmen Kenichiro Ota (Yokohama National University) and Yasuhiro Iwamura (Mitsubishi Heavy Industry Co.).

The conference will take place at the New Fujiya Hotel, in Atami city located about 100 km southwest of Tokyo. The Conference will be held 27 November to 2 December 2005. The ICCF12 Conference will be sponsored by The International Society of Condensed Matter Nuclear Science (ISCMNS) and cosponsored by the Japan CF-Research Society (JCFRS or JCF).

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### **13. Review of 12<sup>th</sup> Annual Russian Cold Fusion Conference**

**Written by Yu.N.Bazhutov**

Resolution of the 12th Russian Conference on Cold Nuclei Transmutation of Chemical Elements and Ball Lightning (RCCNT&BL-12)

The 12th Russian Conference on Cold Nuclei Transmutation of chemical elements and Ball Lightning was held in the city of Sochi (at the “Olimpiyskaya-Dagomys” Hotel, Dagomys settlement) during September 19 through 26, 2004.

The Conference was arranged by the RCCNT&BL-12 Organizing Committee, and Interdisciplinary Committee on Cold Fusion in cooperation with the Russian Committee on the Problems of Ball Lightning at Russian Academy of Science and held under the auspices of the Russian Physical Society, Nuclear Society of Russia, Russian Mendeleev Chemical Society, Moscow Lomonosov State University and Russian Peoples Friendship University.

Edition of the Program and Abstracts of the RCCNT&BL-12, the Proceedings of the previous RCCNT&BL-11 and financial support of the RCCNT&BL-12 were provided by sponsorship of the associated community, in particular by the following scientists: V.F.Sharkov, V.Yu.Velikodny, I.V.Goryachev, L.I.Urutskoev, V.L.Bychkov, A.A.Kornilova and A.V.Eremeev.

Totally 36 scientists and specialists took part in the Conference. The audience was represented by scientists from Moscow (21), Dubna (2), Podolsk (3), Troitsk of Moscow Region (4), Ryazan (1), Krasnodar (1), Sochi (3) and Tomsk (1).

37 reports were presented and considered at the Conference, including 15 reports based upon the results of experimental investigations, and 22 reports about theoretical works & projects. 27 of those presentations (14 experimental and 13 theoretical & project's) were dedicated to the problems of Cold Nuclear Transmutation and 10 presentations (1 experimental and 9 theoretical and reviews) – to the Ball Lightning problems, though

sometimes such division turned out to be definitely conditional since the subject of those reports related to both problems simultaneously.

Among all those reports dedicated to Cold Fusion two presentations evidenced availability of excess heat (Nikitenko, Karabut). One presentation declared about registration of Tritium generation (Romodanov). Six reports said about registration of abnormal nuclear radiation (neutrons, fast electrons, X-ray or  $\gamma$  rays and other types of known or unknown “strange” radiation (Bazhutov, Romodanov, Karabut, Savvatimova, and Urutskoev). Authors of 3 presentations stated about availability of significant number of events of transmutation of nuclei confirmed by the changes in chemical and isotopic composition of the sample matter after electric explosion of metal wires (Urutskoev, Goryachev) and in experiments with glow discharge (Savvatimova). In the reports presenting experimental results there was demonstrated implementation of a wide variety of different methods, some of them being brand new, of triggering the process of cold fusion reactions which is very typical for Russian research works. In the Bazhutov presentation the author implemented laser lighting of water solutions, Nikitenko experimented with high voltage electrolysis, Pevgov – with plasma electrical discharge, Urutskoev employed powerful electric current or arc discharge, Romodanov and Savvatimova continued experimenting with glow discharge, Urutskoev and Goryachev created conditions for electric explosion of metal wires, and so on.

In the experimental works dedicated to the problem of Ball Lightning Klimov presented the results evidencing about disclosing significant amount (1800%) of excess energy generated inside plasmodium and appearing new chemical elements (Cl, Al, S, P, and other).

In 22 theoretical reports dedicated both to the problems of Cold Fusion and Ball Lightning a wide scope of original models of the phenomenon was presented. The authors presented their versions to explain the phenomena under investigation which are to be verified in further experiments. Within the frames of some of those models the authors proposed new concepts of matter and interactions based upon firm theoretical approaches (Rukhadze, Bazhutov, Gareev, Filippov, Velikodny, Vekshenov, Ereemeev, Rodionov, Karasev, Kholodov, Bychkov, Vysikaylo, Schedrin, Scherbak, Vlasov and others).

The reviews presented relating to the problems of Ball Lightning turned out to be very interesting and informative (Bychkov, Nikitin, Stakhanova). At the workshop was also presented a report by Sharkov regarding the importance of joint efforts of science and business for realization of new technologies.

At the same time at the final session a number of speakers (Rukhadze, Urutskoev) stressed out that many experimental reports presented at the Conference did not contained the appropriate estimations of the errors of measurements, the authors rarely paid attention at reproducibility of the results, neglected identifying the parameters determining the main results of their experiments. Absence of such information in the

reports decreases their trustworthiness. They proposed to strengthen the demands towards the reports presented for publication.

In the conclusion all the participants of the Conference unanimously expressed their opinion about the reasonability to continue investigations of the problems of Cold Fusion and Ball Lightning and supported the proposal of the Organizing Committee to hold next 13th Russian Conference on the Problems of Cold Nuclei Transmutation of chemical elements and Ball Lightning (RCCNT&BL-13) in the September 2005.

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## **14. 6th Annual Meeting of Japan CF Research Society Announced**

Written by Akito Takahashi

It is our great pleasure to invite you to participate 6th Meeting of Japan CF-Research Society (JCF6), which is to be held on April 27-28, 2005, in Tokyo, Japan. The details and the application form will be found in the following.

JCF Chairman: Akito Takahashi, (Emeritus Professor in Osaka University)

JCF6 Local Organizer: Hiroo Numata, Tokyo Institute of Technology

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(1) Date: April 27 (Wed.) 28 (Thu.), 2005

(2) Place: The Centennial Hall , O-okayama campus, Tokyo Institute of Technology

Access: <http://www.titech.ac.jp/access-and-campusmap/e/o-okayama-campus.html>

Building No. 5B#7 (Jin <http://www.titech.ac.jp/access-and-campusmap/e/o-okayamaO.html>)

(3) Presentation: Oral (20-30 minutes)

A P.C. projector without an overhead camera and an overhead projector will be available.

(4) Fee: 5,000 Japanese Yen , except the party (see (7) below)

(5) Abstract

Those who want to make a presentation are requested to prepare the abstract, which will be distributed at the beginning of the session. Submission of the abstract is due at April 11, 2005 to either of the following addresses.

The manuscript should be written on a single A4-size paper with margins of 2 cm (left and right) and 2.5 cm (top and bottom). An example will be found at <http://wwwcf.elc.iwate-u.ac.jp/jcf/NEW.HTML>. It may be sent either as a camera-ready manuscript or as a PDF file attached to an email.

(6) Proceedings

A proceedings book will be published some weeks after the Symposium. The details will be found in the 2nd announcement sent to you in the middle of April 2005.

(7) Party

In the evening of the 1st day, April 27, we will have a party with a charge of about 5,000 Japanese Yen.

(8) 2nd Circular

The scientific program and information on preparation of proceedings manuscript will be found in the 2nd circular, which will be sent in the middle of coming April and appear also on the Web Page; <http://wwwcf.elc.iwate-u.ac.jp/jcf/NEW.HTML>.

(9) Application

Please fill the following APPLICATION FORM, and send it by April 11, 2005 to either of the following addresses;

Email: yamadahi@iwate-u.ac.jp

Fax: +81 19 621 6378

Postal mail: Prof. Hiroshi Yamada, Department of Electric and Electronic Engineering, Iwate University Ueda-4-3-5, Morioka, Japan 020-8551

(Editors Note: In contrast with the ICCF series which mostly draws private, government, and academic researchers Prof. Takahashi indicated that the typical mix of attendees at the yearly Japanese cold fusion conference is 50% students, 30% companies and 20% academic researchers)

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## **15. 2004 Department of Energy Cold Fusion Review**

(Note: All related documents can be found here:

<http://newenergytimes.com/DOE/DOE.htm>)

Readers of this newsletter are likely to be surprised that the official conclusion of the review stated, in essence, that there is nothing new in cold fusion research since 1989.

In the conclusion, the DOE politely acknowledged that “significant progress had been made in the sophistication of calorimeters,” yet it delicately avoided writing what the possible significance of this progress might mean. A more courageous DOE might have said, “Despite the fact that calorimetry has improved significantly, the anomalous measurements of excess heat, which were initially thought to have been mere laboratory error, have not disappeared. There has been, so far, no other explanation for the findings of excess heat, except that a new source of energy has been found.”

But, hey, the DOE represents bureaucracy, not innovation. In terms of honestly and accurately reflecting the opinion of the scientific community at large, the bulk of the report did its job. The majority of reviewers approached the subject as best they could for a field which has been the object of ridicule and violent opposition in the past 15 years.

### **Key Points From the DOE Review Document:**

#### **The requests to the reviewers were to consider three charge elements:**

- "(1) To examine and evaluate the experimental and theoretical evidence for the occurrences of nuclear reactions in condensed matter at low energies (less than a few electron volts).
- (2) To determine whether the evidence is sufficiently conclusive to demonstrate that such nuclear reactions occur.
- (3) To determine whether there is a scientific case for continued efforts in these studies and, if so, to identify the most promising areas to be pursued."

#### **Excerpts from Detailed Summary of Reviewers' Response to Charge Element #1**

"The excess power observed in some experiments is reported to be beyond that attributable to ordinary chemical or solid state sources; this excess power is attributed by

proponents to nuclear fusion reactions. Evaluations by the reviewers ranged from: 1) evidence for excess power is compelling, to 2) there is no convincing evidence that excess power is produced when integrated over the life of an experiment. The reviewers were split approximately evenly on this topic."

[Editor's note: Considering the reviewers' limited exposure to cold fusion research, it is quite profound that nine peer-reviewers, who have not been involved with cold fusion research found the evidence for excess power compelling. On the other hand, that the DOE did not conclude and announce publicly that some reviewers found evidence for cold fusion is disappointing and may someday be regarded as an unfortunate delay in the development and application of cold fusion.]

### **Excerpt From Detailed Summary of Reviewers' Response to Charge Element #2**

"Reviewers expert in nuclear physics noted that the cold fusion mechanism put forward by proponents is not in accord with presently accepted knowledge of D + D fusion. Specifically, D + D fusion is accompanied by the production of protons, neutrons, tritons,  $^3\text{He}$ ,  $^4\text{He}$  and high energy gamma rays, all in well known proportions. The fusion channel resulting in  $^4\text{He}$  and high-energy gamma rays occurs approximately only once for every 107 D + D fusion reactions. These characteristic proportions for the production of the fusion products are found for every energy of the incident deuteron measured so far, down to the lowest that has been measured."

[Editor's note: Here is a plain English translation for the physics jargon above: These reviewers state that they know what fusion looks like and "cold fusion" "ain't" it. Excuse me, but didn't we all know that 15 years ago? Here's an analogy for those of us without degrees in nuclear physics: "Experts in fruit" say that all "fruit" is red and crunchy. These experts identify fruit by the name "apple." Technically, the correct term would be "thermonuclear fruit." Experts in "low energy fruit" see something else entirely. They see something that is orange-colored and is soft. They call it, -- drum roll, please -- an orange. The more precise name for their observations is "low energy nuclear fruit." It's enough to make one go bananas.]

### **Excerpt From Detailed Summary of Reviewers' Response to Charge Element 3:**

"The nearly unanimous opinion of the reviewers was that funding agencies should entertain individual, well-designed proposals for experiments that address specific scientific issues relevant to the question of whether or not there is anomalous energy production in Pd/D systems, or whether or not D-D fusion reactions occur at energies on the order of a few eV. These proposals should meet accepted scientific standards, and undergo the rigors of peer review. No reviewer recommended a focused federally funded program for low energy nuclear reactions."

[Editor's Note: The real measure of sincerity among all parties will be shown in the coming months on this matter. Many cold fusion researchers are busily preparing their "well-designed proposals." New Energy Times will track the developments and progress of such proposals to see what, if any, U.S. funding is applied toward this research. And

certainly, the Department of Energy, and only the Department of Energy, knows which are the open-minded reviewers who would be candidates to review such proposals.]

**New Energy Times Summary:**

The review process was performed with care and effectiveness. However, none of the reviewers was given any chance to observe experiments or visit laboratories performing cold fusion research.

18 scientists looked at seven cold fusion papers and answered a few questions in response. Rumor has it that, when word of the DOE's second review of cold fusion became known, the DOE Office of Science was flooded with volunteers to be reviewers. Supposedly, the mix of reviewers whom the DOE chose included nuclear physicists, chemists, and materials scientists. Some of the reviewers' names were inadvertently disclosed and eight of those 11 were physicists. The DOE declined to answer a question as to the specific mix of the other scientists' backgrounds. This is a significant point because nuclear physicists have, by their training, the greatest preconceived blocks to considering the very nature of cold fusion. Also, a not-so-subtle conflict of interest exists with nuclear physicists when it comes to cold fusion. As Upton Sinclair aptly noted, "it is difficult to get a man to understand something when his salary depends upon his not understanding it."

Futurist Sir Arthur C. Clarke described this type of failure in 1962 in *Profiles of the Future*:

"It appears that these debacles fall into two classes, which I will call Failures of Nerve and Failures of Imagination. In 1989, the cold fusion controversy fitted into the second category, Failures of Imagination, which comes into play when all the available facts are appreciated and marshaled correctly but when the really vital facts are still undiscovered and the possibility of their existence is not even admitted.

Today, the cold fusion controversy falls into the first category, Failures of Nerve; many vital facts have been discovered, yet skeptics lack the courage to acknowledge them or their immense implications."

Despite the fact that the DOE has demonstrated a failure of nerve, the process of the review has been effective in advancing an honest and more accurate scientific debate on the subject of cold fusion. The reviewers' actual comments are immensely insightful and likely will become a key document showing the emergence of a new paradigm in science. Their comments can be found here: <http://newenergytimes.com/DOE/2004-DOE-ReviewerComments.pdf>

The few reviewers who obviously elected not to think for themselves but instead repeated things from Huizenga's 12-year-old book are obviously incapable of original, innovative thinking.

Some reviewers who were initially skeptical but now wonder whether something is in fact there, may be among the first to see this emerging new paradigm in science. Some

reviewers made incorrect assumptions, which were based either on misinformation, or lack of information. One example was the erroneous understanding that cold fusion experiments were not reproducible.

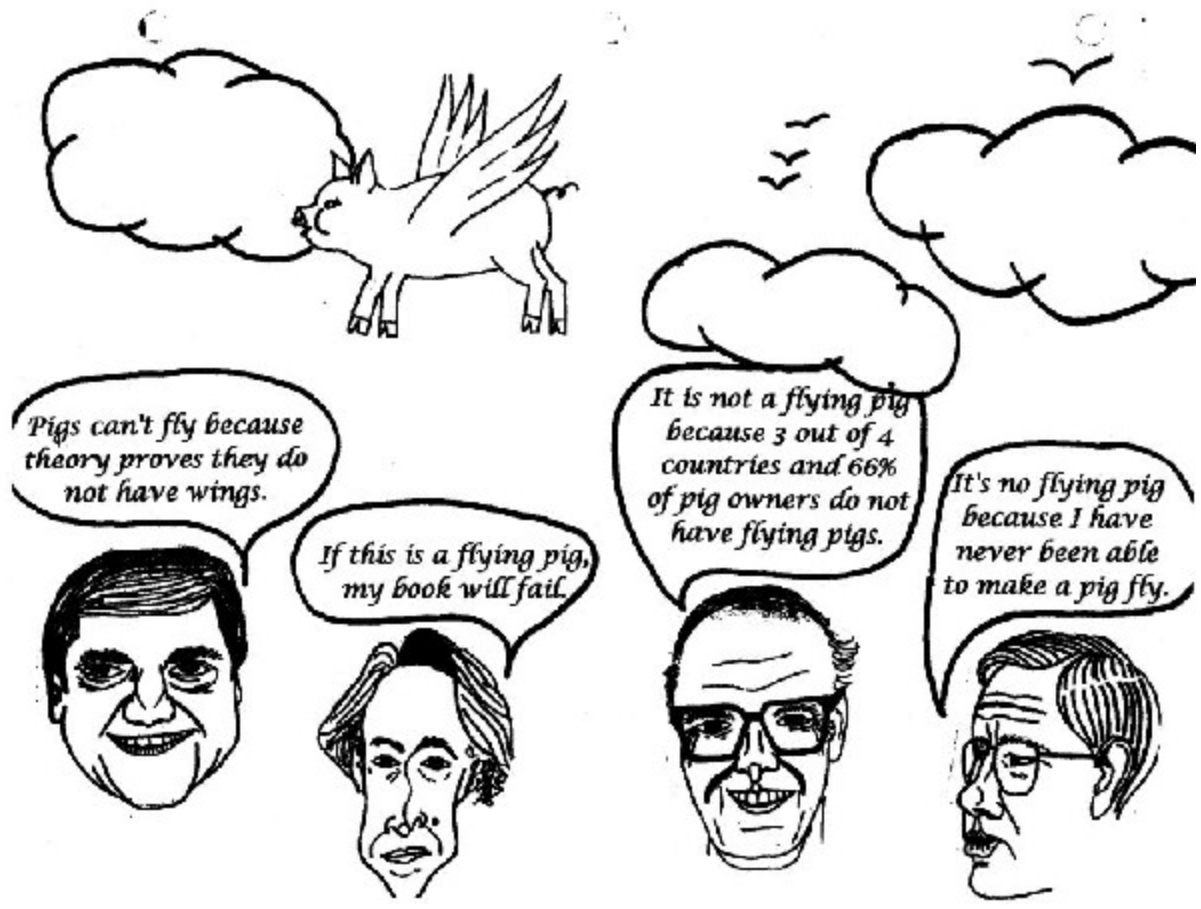
In the coming weeks, New Energy Times will present a thorough response to the various errors, misunderstandings and misinformation that is reflected in the reviewers' comments.

The polarity of the public viewpoints regarding the review is as strong as it was in 1989. Nobel prize winner Brian Josephson can't figure out how *Physics World* can write both of the following quotes, not just in the same article, but also in the same paragraph:

- a) "The reviewers say they remain unconvinced about the reality of cold fusion..."
- b) "Indeed, a third of the reviewers believe that the phenomenon could potentially create excess power."

Josephson postulates that, if one can "invent a logic system for which these two statements are consistent with each other, one may also be able to use it to prove that pigs can fly." (Physics World article, January 2005, "Cold Fusion gets Lukewarm Backing")

As usual, Bob Park shared his typical satirical and acrimonious comment on the DOE review with members of the American Physical Society and subscribers to his "What's New" column. In honor of flying pigs and Bob Park, New Energy Times is proud to display the artwork of former Los Alamos scientist Carol Storms in a previously unpublished cartoon drawn in 1989. Characters depicted are fictional, and any likeness to actual people is purely intentional.



Drawing copyright 1989 Carol Storms

On the serious side, Josephson noted the following with regard to both the DOE's nonconclusion and the lack of serious attention by mainstream media: "The curious thing is that no one seems able to connect the two dots. One, a problem with current energy supplies consisting in the fact that most generate either nuclear radiation or greenhouse gases, and two, the likely existence, in low energy nuclear reactions / cold fusion, of a new, not vastly expensive, energy source without either of these problems."

Considering the official "conclusion" by the DOE staffers of "nothing new," there is one remaining question that seems to be unanswered: What was their real motivation to perform this second review? It seems inconceivable that they decided to reconsider "the scientific fiasco of the century" (as stated by John Huizenga, director of the 1989 DOE panel) merely because four individuals from the cold fusion community requested the review.

Perhaps a crack in the door to new physics and new energy has opened.

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## 16. George Miley Receives Award From American Nuclear Society

### **2004 ANS Radiation Science and Technology Award Given to George H. Miley**

The Department of Nuclear, Plasma and Radiological Engineering at the University of Illinois contributed to this story.

The American Nuclear Society, in recognition of the expanding contributions radiation sciences make to industrial progress, established the Radiation Science and Technology Award in 1967. The award identifies and honors those individuals whose creative application of radiation sciences and engineering principles have been particularly outstanding.

The 2004 award was presented to George H. Miley, Department of Nuclear, Plasma and Radiological Engineering at the University of Illinois at an honors and awards luncheon in Washington, D.C., Nov. 16, 2004. Miley was cited for “his creative contributions to radiation science and technology in furthering the development of nuclear batteries, nuclear pumped lasers, and small fusion-based neutron sources for industrial neutron activation analysis.”

Miley is known in the cold fusion community for his thin-film CMNS research. Related papers can be found at <http://www.lenr-canr.org/>

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## **17. Three Japanese Cold Fusion Researchers Win Thermal and Electronic Energy Technology Awards**

Written by Akito Takahashi

On 10th December 2004, the TEET (Thermal and Electronic Energy Technology) Foundation which is a Toyota Family company had the 11th Minoru Memorial Symposium with ceremony giving scholarship-awards to 10 researchers in the field of four categories, 1) new hydrogen energy (condensed matter nuclear science), 2) semiconductors for energy application, 3) electricity generation by low and medium difference of temperature, 4) fuel cells and secondary batteries.

For the first category, three JCF members, namely, Dr. Yasuhiro Iwamura (MHI), Prof. Hiroshi Yamada (Iwate University) and Dr. Tadahiko Mizuno (Hokkaido University) were awarded research scholarships with 1MYens per person. Their research titles are as follows: Dr. Yasuhiro Iwamura: Study on nuclear transmutation effects by deuterium permeation through multi-layered Pd complex. Prof. Hiroshi Yamada: Study on excess energy production and transmutation in PdDx with absorption and de-sorption by electric current. Dr. Tadahiko Iwamura: Hydrogen production from organic compound liquid by discharge electrolysis.

Especially, nuclear transmutation studies by Iwamura et al., Yamada et al. and Mizuno et al. are now being seriously acknowledged by evaluators of the TEET Foundation who are highly respected scientists in Japan.

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## **18. Japanese Financial Times Ranks MHI Transmutation No. 3 in Advanced Technological Innovation**

Akito Takahashi contributed to this story.

The Nikkei-Shinbun (Japanese Financial Times) wrote an article on the most important technological trends in 2004 on its science page of the 27 December 2004 issue. The Mitsubishi Heavy Industry (MHI) transmutation work (led by Dr. Yasuhiro Iwamura) of deuterium permeation through palladium complexes ranked No. 3. The No. 1 selection was the bio energy synthesis by the joint work of Hamamatsu Photonics Co. and the University of Tokyo. Five of the top 20 were related to the information transfer technology by quantum communications. The MHI work was the only one ranked within the 20 for nuclear-related science and technology.

The Nikkei-Shinbun wrote of the MHI work, "This is a very innovative technology to make transmutation of elements with low costs, compared with existing methods as fission reactors and big accelerators, and when rare noble elements will be produced like alchemy it will be so beneficial to humanity."

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## **19. 2004 New Energy Times Ostrich Award**

The 2004 New Energy Times Ostrich Award goes to Filippo Neri, apparently a high-energy physicist with the Los Alamos National Laboratory, for his Amazon "review" of our book. Clearly, Neri has not read our book, for he would not make such false statements or ask such ignorant questions if he had. Amazon removed Neri's "review" for violating their terms of acceptable use, but a day later, Neri placed his review on Amazon a second time. It appears to be gone now, but we have preserved his bitter invective as an example of the fierce opposition encountered by those seeking answers to the cold fusion mystery.

### **The Neri Pseudo-Review:**

"Written, by a business major and a psychotherapist, this untimely attempt to reopen the Cold Fusion (CF) debate will be a hit only with the gullible CF supporters. CF was a joke that had gone on too long already ten years ago: no reputable attempt to produce any effect has been successful. A senile Arthur C. Clarke endorsed this book. What a shame! The authors, with no apparent science qualifications of any kind, are the editors of something called the "New Energy Times", clearly a very respectable scientific journal! Don't waste your money on this book (or, if you are a believer in CF, then waste your money and stop bothering the rest of us)! If cold fusion works so well, why aren't the proponents very rich already? If it does not work, why is more money needed to prove it?"

### **New Energy Times Response to the Neri Pseudo-Review:**

Is that the best you can do Filippo Neri? The German philosopher Arthur Schopenhauer's second stage so eloquently stated, "When a new truth enters the world, the first stage of reaction to it is ridicule, the second stage is violent opposition, and in the third stage, that truth comes to be regarded as self-evident." Neri's actions tell us that cold

fusion is still in the second stage, at least among some people. Neri and others who choose to be so viciously and irresponsibly unscientific: We encourage you to listen carefully to the winds of change. As Brian Josephson said, "In regard to cold fusion, it would be advisable for the scientific community to brace itself for the fallout that will be coming soon when the public starts to become aware that the scientific community was engaging in an act of gross self-deception."

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## 20. Cold Fusion in the Courts: John Dash Makes His Case

Source: [http://www.patentlyobviousblog.com/2004/12/n\\_dash\\_keefe.html](http://www.patentlyobviousblog.com/2004/12/n_dash_keefe.html)

### *Federal Circuit Rejects Professor's Attempt to Patent Cold Fusion Technique*

*In re Dash and Keefe* (Fed. Cir. 2004) (Unpublished)

In 1990 [professor John Dash](#) filed a patent application for producing heat energy using nuclear fusion at a low temperature. Experimental results suggesting that nuclear fusion occurred in their apparatus were submitted to the Patent Office in support of Dash's attempts to overcome utility rejections mounted by the PTO.

Dash appealed the Board's rejection of his application for lack of enablement and utility.

On appeal, the CAFC relied on the "scientific community's considerable doubt" regarding the utility of "cold fusion" in sustaining a prima facie case for lack of utility and enablement -- even though the articles relied upon by the PTO were anecdotal and not peer-reviewed. "We are aware of no rule that forbids the examiner from relying on related technology, anecdotal information or sources that are not peer-reviewed to establish a case of inoperability. . . . The Examiner must only establish that a person of ordinary skill in the art would reasonably doubt the asserted utility."

The court then rejected Dash's Rebuttal Evidence: "For each type of evidence Dash produced, the examiner found at least one sound reason to disbelieve the evidence." The rejection was affirmed.

**Comment:** (i) All this comes in the wake of the DOE's report that they are accepting quality research proposals on cold fusion. (ii) If this were a published opinion, it would be quite a precedent -- giving some real teeth to the utility requirement.

**Here is the conflict:** Applicants use statements from experts saying "a certain result cannot be accomplished" to prove that the result is nonobvious. Now, the court brings a double-edged sword -- finding that those statements can now be used to show a lack of utility.

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## 21. Murder Investigation of Eugene Mallove

There is not much news to report here, but because of numerous requests we have asked for an update from Infinite Energy. It reports that it is not permitted to divulge all that is known except that forensic work is being done on evidence. The investigation is open and active, and the family believes that good work is being done to ensure that someone is brought to justice for this horrific crime.

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## 22. Jed Rothwell Writes (Free) E-Book on Cold Fusion

*Cold Fusion And The Future* shows how this controversial energy source might change our future. The book describes how many nightmare-ish problems such as global warming, invasive species, and the lack of clean drinking water may be remedied with cold fusion combined with other technologies. The future might be better than you think, Rothwell says.

<http://lenr-canr.org/acrobat/RothwellJcoldfusiona.pdf> (6 MB)

Higher resolution printable copies are available here:

<http://lenr-canr.org/ColdFusionAndTheFuturehires.pdf> (17 MB)

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## 23. "Pathological Skepticism" by Bill Beaty

As I understand it, little has changed since 1995: many researchers are successful, but science journals automatically reject their papers because "everyone knows" that CF is bogus. And funding sources automatically reject research proposals for the same reason.

I remember a bit from a sociology article from years ago. It turns out that once a person has publicly ridiculed something, something clicks in their mind, and they can no longer retract their ridicule. If the target of their ridicule is later proved valid, it's almost impossible for that person to admit they were wrong. They'd rather die or go insane than admit to being the bad guy. By hurling ridicule, scientists "freeze" their bad opinions, becoming emotionally entangled.

This effect produces very twisted psychology. For example, Langley, the head of the Smithsonian Institution, went to his grave insisting that the Wright Brothers were a fraud. He apparently joined the crowd of experts who ridiculed them early on, before the Wrights had given up on the USA and gone off to convince Europe that their device really flew. After they became world-famous, Langley changed his view slightly: saying that the Wrights were still frauds because they were lying about the dates of their first flights. As a result, the Wright Brothers donated their early airplanes NOT to the Smithsonian museum, but to a museum in the UK.

Everyone had to wait for Langley to die. Only then were the Wright Flyers finally brought back to the USA and put on display.

People go on and on about "pathological science," yet it appears to me that the greatest danger in science is pathological skepticism. It led Max Plank to say: "A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it."

Resources about pathological skepticism

<http://www.skepticalinvestigations.org>

Bill Beaty's page

<http://amasci.com/weird/wclose.html>

Skeptics of Upper New York: Myths of Skepticism

<http://www.rpi.edu/~sofkam/talk/talk.html>

CSICOP: Abuses of Skepticism

<http://www.csicop.org/doubtandabout/abuses/>

Pseudo critical-thinkers

<http://www.suppressedscience.net/skepticism.html>

Pseudo-inquirers

<http://www.csicop.org/si/9711/preposterism.html>

Zeteticism

<http://blavatskyarchives.com/zeteticism.htm>

Logical Trickery

<http://web.archive.org/web/20010806215105/http://www.primenet.com/~bdzeiler/discussion/Trickery.htm>

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## 24. Hot Fusion Bubbles in Impulse Device's Ultrasonic Sphere

Are people confused by the recent news from Impulse Devices? You bet. Why? Read on. The cold fusion community has used the term "sonofusion" since 1989 when Roger Stringham and Russ George introduced their acoustic cavitation work with palladium-deuterium experiments. Impulse Devices has now started to use the term "sonofusion" for its hot fusion research.

Rusi Taleyarkhan and a team at the U.S. Oak Ridge National Laboratories introduced "bubble fusion" in the March 8, 2002, issue of the journal *Science*. The announcement brewed no small tempest among scientific academia. The bubble fusion experiment is a miniature version of hot fusion and controversial in its own right. A few prominent and outspoken members of the physics community got all up in arms when the news of a small-scale hot fusion experiment was announced.

The Taleyarkhan bubble fusion apparatus worked in a six-inch-long glass cylinder rather than the three-story high tokamak behemoth. The mere idea of a fusion reaction occurring on the benchtop sent chills through William Happer, a physicist at Princeton University, and Richard Garwin of IBM's Thomas J. Watson laboratory in Yorktown Heights, New York, who each attempted to suppress the new research in letters to *Science* prior to publication of the paper.

Regardless, the paper was published and it received its fair share of criticism. Taleyarkhan returned fire and in March 2004 published a second paper in *Physical Review E*, reportedly answering all of the objections raised from the first *Science* paper, and creating a favorable impact on skeptical scientists who read the paper.

To the dismay of those invested in large-scale hot fusion experiments, bubble fusion recently reared its head again, this time with a short article in *Nature* (432, 940-1, 23/30 ~Dec. 2004.) "A company in California is launching an experimental power reactor based on 'bubble fusion', despite reservations within the scientific community over whether the effect exists... Impulse Devices in Grass Valley hopes to sell its sonofusion research

reactors for about US\$250,000. It claims they use ultrasound to generate bubbles in 'heavy' water, made up of hydrogen's heavier isotope deuterium. The bubbles can be imploded rapidly, generating a high temperature that allows deuterium nuclei to undergo fusion reactions, it says."

[Editor's note: The term "heavy water" is incorrect for this work. The solution used is deuterated acetone, which is acetone where the hydrogen atoms have been replaced by deuterium atoms. "Heavy acetone" would be a more appropriate alternate term.]

The work being promoted by Impulse Devices Inc. is the hot fusion version of the acoustic cavitation method, similar to the Oak Ridge bubble fusion. The Web site for Impulse Devices <http://www.impulsedevices.com/> identifies the work as "acoustic inertially confined fusion." It also explains, in a statement written by Lawrence A. Crum, "The terms "sonofusion" and "bubble fusion" are not favored by proponents of "acoustic ICF" because these terms have been used before by conventional "cold fusion" believers who use ultrasound to enhance conventional cold fusion.

Impulse Devices now seems to want to claim the term sonofusion, though its Web programmer apparently has not caught up with the new program. On Dec. 13, 2004, Impulse Devices distributed a press release calling its work "sonofusion." And in a Dec. 26 e-mail, Ross Tessien, president and founder of Impulse Devices, politely asked New Energy Times to "reserve the term sonofusion for the hot fusion arena." Tessien suggested that the cold fusion community instead "use something like, Sonic Loaded Cold Fusion." Members of the cold fusion research community suggested that Impulse Devices use the term "Acoustic Inertial Confinement Fusion" or "Bubble Fusion." Who will win the name game?

According to the Impulse Devices Web site, Tessien has built a team of world-class physicists. Other team members are Mark Ludwig, Bob Leppo, Dr. Felipe Gaitan, and Mike Cannon. Tessien also stated that Rusi Taleyarkhan is working with the team, as well.

Bubble fusion occurs within a microscopic area within a container of deuterated acetone. At the locus of the reaction, temperatures reach 100 million degrees. The heat is carried off by convection through the bulk of the deuterated acetone solution, much like "the heat of a candle is diffused within a room," Tessien explains. While bubble fusion produces a large number of neutrons while the device runs, shielding blocks the short-term emissions to reduce the human health hazard.

Unlike fission reactors, bubble fusion produces no radioactive waste. As soon as the device is turned off, no danger remains from neutron emissions.

Unlike cold fusion, which produces neutrons and tritium only rarely, bubble fusion produces neutrons and tritium in the same amount as one would expect for conventional hot fusion reactions.

According to Tessien, the best power levels generated from bubble fusion experiments are those of Rusi Taleyarkhan of Purdue University, "about one watt input power and one micro watt output." These devices, like all fusion experiments, are intended only to be research devices, not power generators, he emphasizes. Tessien claims that they have excellent control of the effect and can turn it on, or off or keep it going indefinitely.

Taleyarkhan apparently turned some heads with his second paper. Tessien reports that Seth Putterman at the UCLA Physics Department, along with a collaboration with Taleyarkhan, recently received a \$1 million grant to replicate Taleyarkhan 's work.

Impulse Devices states that its "technology could produce energy on a break-even basis in five years and enough net energy for electricity production in 10 years." This is good news if it succeeds. Any form of fusion -- hot, cold, or warm -- would be better than our continued destruction of the planet and being held hostage by the petroleum industry and oil-producing nations. Tessien agrees. "It does not matter what kind of fusion reactor comes on line," he says, "It will solve the energy problem."

The real problem is informing the public that an energy catastrophe is looming if a major alternative to fossil fuels doesn't arrive within a few decades and that fusion alternatives deserve serious consideration.

Ironically, cold fusion researchers have exceeded break-even hundreds, perhaps thousands of times, yet because cold fusion is largely thought to be too miraculous to be true, these facts are ignored by mainstream science. Impulse Devices states that "with sonofusion, one gallon of heavy water at a fuel cost of just \$200 would release about the same energy as one million gallons of gasoline (approximately 40,000 barrels of oil)."

While those familiar with cold fusion can conceive of such good news, the advocates of traditional hot fusion are not likely to accept this claim. But why would they? What a monumental embarrassment it would be if a desktop reactor succeeded where the monstrous tokamak or the star wars-type laser fusion failed?

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## **25. Cold Fusion in the News**

**San Francisco Chronicle: "X Prize Offers Big Bucks for Big Science," by Keay Davidson (Nov. 15, 2004)**

<http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2004/11/15/MNGO39RK621.DTL>

"X Prize founder Diamandis went looking for new worlds to conquer, so to speak. He conferred with Clark, chairman of the World Technology Network, which bills itself as 'over 800 individuals and organizations from over 50 countries nominated and judged by their peers to be the most innovative in the technology world.'

Diamandis and Clark announced their plans for future contests in early October. 'The prizes may bring us closer to finding cures for major diseases' and bring about 'advancements in teleportation, molecular assemblers, cold fusion and other arenas with major societal implications,' said one of their press statements."

**The Washington Post Magazine, "Warming Up to Cold Fusion," by Sharon Weinberger (Nov. 16, 2004)**

<http://www.washingtonpost.com/wp-dyn/articles/A54964-2004Nov16.html>

"On a quiet Monday in late August -- a time of year when much of the Washington bureaucracy has gone to the beach -- a panel of scientists gathered at a Doubletree Hotel set between the Congressional Plaza strip mall and a drab concrete office building on Rockville Pike. .. The Department of Energy went to great lengths to cloak the meeting from public view. No announcement, no reporters. None of the names of the people attending that day was disclosed. The DOE made sure to inform the panel's members that they were to provide their conclusions individually rather than as a group, which under a loophole in federal law allowed the agency to close the meeting to the public... All the secrecy likely had little to do with national security and more to do with avoiding possible embarrassment to the agency. To some, the meeting would seem no less outrageous than if the DOE honchos had convened for a séance to raise the dead -- and in a way, they had: Fifteen years ago, the DOE held a very similar review of the very same idea."

**The New York Times, "Evidence on Cold Fusion Remains Inconclusive, New Review Finds," by Kenneth Chang (Dec. 2, 2004)**

<http://www.nytimes.com/2004/12/02/science/02fusion.html>

"In a new review of cold fusion - the claim that energy can be generated by running electrical current through water - the Department of Energy released a report yesterday that says the evidence remains inconclusive, echoing a similar report 15 years ago. Over the past several months, 18 scientists reviewed research in cold fusion, and two-thirds of them did not find the evidence for nuclear reactions in the experiments convincing. Almost all of them, however, said that aspects of cold fusion merited consideration for further research."

**Nature Magazine, "U.S. Review Rekindles Cold Fusion Debate," by Geoff Brumfield (Dec. 2, 2004)**

<http://www.nature.com/news/2004/041129/full/041129-11.html>

**Energy panel split over whether experiments produced power.**

"According to the report, the panel was 'split approximately evenly' on the question of whether cold experiments were actually producing power in the form of heat. But members agreed that there is not enough evidence to prove that cold fusion has occurred, and they complained that much of the published work was poorly documented. The review is a positive step for the field of cold fusion, according to David Nagel at George Washington University in Washington DC, who co-authored the summary of cold-fusion work that the panel reviewed. 'Most scientists think that cold fusion is laughable, but when the dust settled, the researchers reviewing our work were evenly split,' he says."

**Salt Lake Tribune, "Review Says Many Scientists Still Cool on Cold Fusion," By Robert Gehrke (Dec. 3, 2004)**

[http://www.sltrib.com/utah/ci\\_2480309](http://www.sltrib.com/utah/ci_2480309)

"Fifteen years after a discredited University of Utah effort, scientists remain lukewarm on cold fusion, according to a new Department of Energy review. Cold fusion believers, [sic] however, were encouraged that many of the reviewers in the DOE study found compelling signs that cold fusion experiments produced heat and nuclear products and said further experiments are warranted - a level of acceptance for cold fusion rarely reflected in the scientific world."

**Science Magazine, "Outlook for Cold Fusion Is Still Chilly," by Charles Seife (Dec. 10, 2004)**

(Subscription only)

"A small cadre of cold-fusion enthusiasts has doggedly kept on the trail of endless energy. So when DOE decided in March to conduct a review of cold-fusion research, the move raised eyebrows among mainstream scientists who have long since abandoned the quest. 'They asked me to serve on it, but I resolutely refused,' says William Happer, a plasma physicist at Princeton University and a harsh critic of cold-fusion research. That attitude didn't surprise those proponents of cold fusion who had pushed DOE to take another look. 'I was told going into this that we would be facing an extremely skeptical and pretty hostile crowd of reviewers,' says Peter Hagelstein, a cold-fusion researcher at the Massachusetts Institute of Technology.

Several reviewers were indeed extremely critical of the research, saying that many of the experiments were poorly conducted, had results that were inconsistent with each other, and often weren't reproducible. One skeptical reviewer went further, opining that '[cold fusion] workers are true believers, and so there is no experiment that can make them quit.'"

**Reason Magazine, "Hot '5 Or Stinko Cinco? Good and Bad Predictions for the New Year," by Ronald Bailey (Dec. 30, 2004)**

<http://www.reason.com/links/links123004.shtml>

"Renewed government funding for cold fusion research is likely. Could this be the solution to any global warming worries? Naturally, ideological environmentalists would oppose it. Recall that neo-Malthusian Paul Ehrlich warned that cold fusion by providing humanity with a cheap inexhaustible energy supply would be 'like giving a machine gun to an idiot child.' Luddite Jeremy Rifkin declared, 'It's the worst thing that could happen to our planet.'"

**India Times, "Beyond the Horizon of Humdrum," by Jug Suraiya & Vikas Singh (Jan. 1, 2005)**

<http://timesofindia.indiatimes.com/articleshow/977936.cms>

"Cold fusion — harnessing nuclear energy without recourse to the humongous temperatures that conventional fusion entails — has long been the holy grail of fringe science. Experimenters from Baltimore to Bangalore have claimed success. (The lad from Karnataka said he'd achieved cold fusion in his bathtub). All such claims have been disproved. But many — like us — believe cold fusion is indeed possible. And will be made to happen, sooner rather than later. So why not in 2005?"

**Physics Today, "Cold Fusion Gets Chilly Encore," by Toni Feder (Jan. 6, 2005)**

<http://www.physicstoday.org/vol-58/iss-1/p31a.html>

"Claims of cold fusion are no more convincing today than they were 15 years ago. That's the conclusion of the Department of Energy's ...Cold fusion researchers put a rosier spin on the report. 'The greatest vindication for the cold fusion community was that, instead of being treated like cripples, lepers, and idiots, we were treated like normal scientists in the handling of this review,' says Michael McKubre, an electrochemist at SRI International in Menlo Park, California. 'Just the fact of the review has heightened the level of discussion. There's been a huge upswing in interest in funding cold fusion research.'"

**TechNewsWorld, "The Big Science Chill," by Sonia Arrison (Jan 7, 2004)**

<http://www.technewsworld.com/story/39360.html>

"This scientific McCarthyism has a chilling effect on research and could be holding America back from major scientific breakthroughs. If we could figure out cold fusion, we'd have a clean, cheap energy source that would last for an incredibly long time. And that would mean less reliance on oil exporting countries, as well as a cleaner environment and a better standard of living. So even if some experts say it's a long shot, isn't it worth working towards?"

[Editor's note: Bravo Sonia Arrison! Finally, someone has connected the two dots, as Brian Josephson had hoped. It seems that Ms. Arrison has done her homework. In fewer than 900 words, she has eloquently illuminated the vulnerability of scientific research to politics, the reality of cold fusion's potential as well as its uncertainty. She has the guts to identify the scientific censors as well as the national security concerns. Arrison is a TechNewsWorld columnist and director of Technology Studies at the California-based [Pacific Research Institute](#).]

**Journal of Scientific Exploration, "Science in the 21st Century: Knowledge Monopolies and Research Cartels," by Henry H. Bauer (Vol. 18 #4 pp. 643--660, Winter 2004)**

<http://newenergytimes.com/Library/2004BauerH-21stCenturyScience.pdf>

Courtesy of <http://www.scientificexploration.org/index.html>

**Abstract**—Minority views on technical issues are largely absent from the public arena. Increasingly corporate organization of science has led to knowledge monopolies, which, with the unwitting help of uncritical mass media, effect a kind of censorship. Since corporate scientific organizations also control the funding of research, by denying funds for unorthodox work they function as research cartels as well as knowledge monopolies. A related aspect of contemporary science is commercialization.

Science is now altogether different from the traditional disinterested search, by self-motivated individuals, to understand the world. What national and international organizations publicly proclaim as scientific information is not safeguarded by the traditional process of peer review. Society needs new arrangements to ensure that public information about matters of science will be trustworthy.

Actions to curb the power of the monopolies and cartels can be conceived: mandatory funding of contrarian research, mandatory presence of contrarian opinion on advisory panels, a Science Court to adjudicate technical controversies, ombudsman offices at a variety of organizations. Most sorely needed is vigorously investigative science journalism.

[Editor's note: Toward the end of his paper, Henry Bauer touches on the very heart of why mainstream science journalism has been largely unwilling/unable to bridge the communication gap between the cold fusion community and the broader science community. This is, in fact, one of the core reasons why New Energy Times was founded. "A constant dilemma for reporters," Bauer says, "is that they need access to sources, and if they publish material that casts doubt on the official view, they risk losing access to official sources."]

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## **26. Speakers Available - Experts on the Subject of Cold Fusion**

Steven B. Krivit - General audiences (Co-author of *The Rebirth of Cold Fusion*)

Charles G. Beaudette - Academic audiences (Author of *Excess Heat and Why Cold Fusion Research Prevailed, 2nd Ed.*)

David J. Nagel - Government and military audiences (Participant in the 2004 DOE Cold Fusion Review)

\* Please send requests to [info2@newenergytimes.com](mailto:info2@newenergytimes.com)

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## **27. Recent Updates to the New Energy Times(tm) Web Site**

DOE page

<http://newenergytimes.com/DOE/DOE.htm>

ICCF-11 page

<http://www.newenergytimes.com/iccf11/iccf11.htm>

ICCF-11 Trip Report from Jim Corey of Sandia National Laboratories

<http://newenergytimes.com/iccf11/ICCF11-2005-CoreyJim-TripReport.pdf>

ICCF-10 Trip Report from Jim Corey of Sandia National Laboratories

<http://www.newenergytimes.com/ICCF10/ICCF10-2004-CoreyJim-TripReport.pdf>

"Science in the 21st Century: Knowledge Monopolies and Research Cartels," by Henry H. Bauer

<http://newenergytimes.com/Library/2004BauerH-21stCenturyScience.pdf>

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<http://www.newenergytimes.com/paypaldonate.htm>

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## **29. Administrative**

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