

FUSIONfacts

A Monthly Newsletter Providing Factual Reports On Cold Fusion Developments

ISSN 1051-8738

• University of Utah Research Park •

ISSN 1051-8738

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Fusion Facts Now Reports on Both Cold Fusion and Other Enhanced Energy Devices.

VOLUME 7 NUMBER 12

JUNE 1996

CONTENTS FOR JUNE 1996

A. IMPURITIES FOUND IN ELECTRODES Bockris & Minevski	2
B. MEETING OF THE DISSIDENTS..... AAAS conference abstracts	3
C. COLD FUSION CONSIDERED	8
D. NEWS FROM THE U.S.	10
E. NEWS FROM ABROAD	12
F. ARTICLE - TINY BUBBLES	14
Chuck Bennett on Sonofusion	
G. LETTERS FROM READERS	15
H. BOOK REVIEWS	17
Magnet Science - Greg Vecchione	
The Coming Energy Revolution - Jeane Manning	
The Sierra Club Green Guide	
I. MEETINGS	20
COMMERCIAL COLUMN	20

JOURNAL OF NEW ENERGY

Volume 2

Will be out at the end of June.

Volume 3 to be printed in September, 1996,
will include the Proceedings of the Second
Conference on Low-Energy Nuclear Reactions.

NOTICE OF DEVELOPMENT FUNDING

The Fusion Information Center (FIC) has been informed that they will receive an equity investment of approximately ten million dollars for the commercialization of cold fusion and other enhanced-energy devices. The receipt of these equity funds has been approved by FIC's board of directors.

Negotiations are proceeding for several selected new energy projects (some joint ventures) including the following:

1. Continuation and expansion of publishing activities.
2. The commercialization of the Fiber Power Cell, an FIC cold fusion invention.
3. The commercialization of the stabilization of radioactive nuclei.
4. The development of special equipment for viewing short-time events such as high-density charge clusters.
5. Supermagnets and/or supermotors.
6. Advanced battery and motor technologies.
7. Selected joint ventures in solid-state devices.

Limited funds for ready-to-commercialize, new-energy devices will be available for new projects. Contact Hal Fox, President, Fusion Information Center, Voice 801-583-6232, Fax 801-583-2963.

A. TWO ZONES OF 'IMPURITIES' OBSERVED AFTER PROLONGED ELECTROLYSIS OF DEUTERIUM ON PALLADIUM

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Reprinted with permission of *Infinite Energy* magazine, vol 1, nos 5 & 6, 1996, pp 67-68.

AUTHORS' ABSTRACT

In experiments carried out recently in which hydrogen was electrolyzed from water in contact with a palladium electrode, the concentration and depth of impurities were measured as a function of electrolysis time. It was found that after 3 weeks, two different sets of impurities could be observed, one set within 50Å of the surface and another set of different chemical species, about 1µ inside the metal.

Thus, the XPS measurements (Table 1) showed materials which correspond roughly to elements found in the solution after three weeks by ICP measurements (see Fig. 1). The concentration of platinum found in the palladium, for example, rose to a maximum at about 8-11Å from the surface and decreased exponentially so that by 50Å from the surface no further platinum could be seen. Similar concentration profiles were observed for silicon and zinc.

From these XPS determinations it can be concluded that the impurities measured, which spread no further than a few tens of Å inside the Pd, originated in the solution by means of electrochemical deposition or adsorption on the electrode surface and subsequent diffusion into the electrode.

In confirmation of this, the information in Fig. 1 shows materials in solution as a function of the time of electrolysis.

Energy dispersive spectroscopy (EDS) was also used to seek material which might be further into the metal. In EDS, the maximum intensity of the signal arises from a greater depth than that of XPS [1]. In fact, for palladium, for a 20 kV X-ray beam, the escape depth maximizes at about 2µ inside the palladium and the signals found both after one hour's electrolysis, and then after three week's electrolysis, are shown in Fig. 2 and Fig. 3, respectively. It is seen that new nuclei have appeared at this depth in the presence of hydrogen at high fugacity (overpotential more than 0.5 volts).

DEPTH (Å)	ELEMENTS ON THE ELECTRODE SURFACE (ATOMIC %)			
	Pd	Pt	Si	Zn
5.0	0.39	49.16	20.02	30.42
7.5		78.93	13.98	7.08
10.0	0.34	78.38	11.35	9.94
12.5	6.90	65.53	12.38	15.19
15.0	40.99	40.19	6.40	12.41
25.0	84.36	5.63	1.87	8.13
35.0	93.16	2.12	2.36	2.36
45.0	96.87	1.54	0.51	1.07
55.0	96.81	1.06	1.06	1.06

TABLE 1. Atomic weight percent of elements found on the electrode surface after three weeks of electrolysis (XPS).

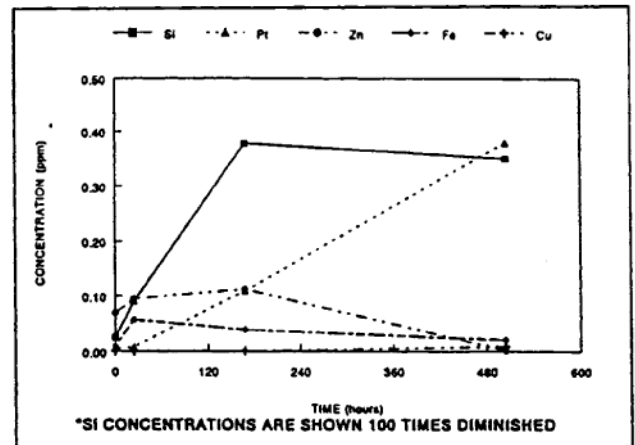


FIGURE 1. Concentration time dependence of Pt, Zn, Fe, Cu, and Si from ICP measurements during a 3 weeks period.

The concentration of the new atoms is in the range 1-10 atomic percent. The materials shown in Table 2 have no relationship to the impurities in the solution (further, diffusion of the materials cited in Figures 2 and 3, into depth of ~ 1µ could not occur in three weeks).

Thus, protons at high fugacity in Palladium may give rise to new nuclei ("proton capture"). These results are similar to those of Karabut, Kucherov and Savvatimova [2] who found many new materials formed in palladium after electrolysis. Similar results, according to T. Passell [3], were found by K. Wolf after examination of his palladium electrodes subject to similar electrolysis (radioactivity was also observed in this study). T. Ohmori and Enyo [4] have reported the formation of new iron nuclei in gold and palladium cathodes; J. Dash [5] has described the formation of Au and Ag on Pd electrodes after hydrogen evolutions. Correspondingly, Bush and Eagleton [6] have observed new strontium during the electrolysis of platinum in a rubidium

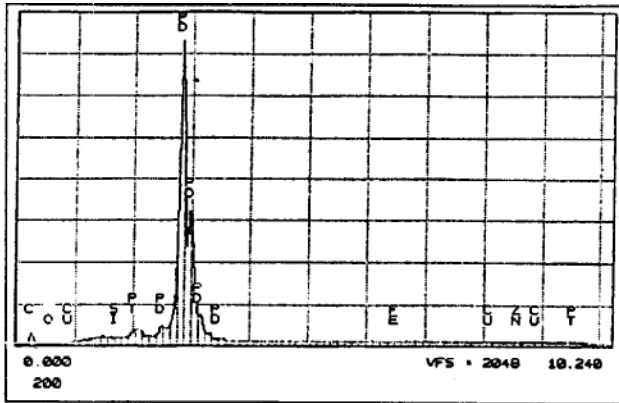


FIGURE 2. EDS scan of Pd electrode after one hour of electrolysis.

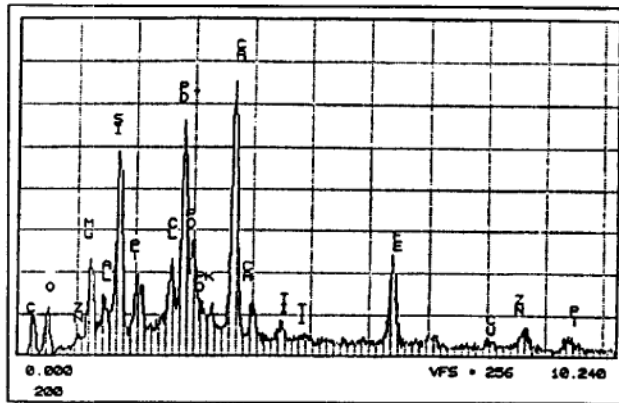


FIGURE 3. EDS scan of Pd electrode after three weeks of electrolysis.

containing solution; while Notoya [7] has found that new Ca^{++} forms K^{+} in solution. Such results are, to some degree, rationalized by models of the excited nucleus discussed by Greiner, et al. [8].

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2. D.B. Karabut, Y.R. Kucherov and I.B. Savvatimova, 5th International Conference on Cold Fusion, Monte Carlo, 1995.
3. K. Wolf (through T. Passell), "Overview of EPRI Program in Deuterated Metals," J. New Energy, vol 1, no 1, 1996, pp 5-14, 25 refs, 10 figs, 1 table.
4. T. Ohmori and M. Enyo, Cold Fusion Source Book, Russian ed., Belarussian St. Univ., Minsk, 1994.

Element	ELEMENTS AT 1 μ m DEPTH (Atomic %)		
	Virgin Pd		Electrolyzed Pd 3 weeks/EDS
	Johnson-Matthey/ICP	Present Work/EDS	
Mg	$< 1.0 \cdot 10^{-4}$	- *	6.7 ± 1.0
Ag	$< 1.0 \cdot 10^{-4}$	- *	1.9 ± 1.0
Si	$8.0 \cdot 10^{-4}$	- *	10.2 ± 1.0
Cl	-	- *	3.0 ± 1.0
K	$9.0 \cdot 10^{-4}$	- *	1.1 ± 1.0
Ca	$3.5 \cdot 10^{-3}$	- *	19.9 ± 1.0
Ti	$< 3.0 \cdot 10^{-4}$	- *	1.6 ± 1.0
Fe	$< 4.0 \cdot 10^{-4}$	- *	10.5 ± 1.0
Cu	$4.5 \cdot 10^{-3}$	- *	1.9 ± 1.0
Zn	$< 4.0 \cdot 10^{-4}$	- *	4.2 ± 1.0
Pt	$1.0 \cdot 10^{-2}$	- *	7.1 ± 1.0
Pd	99.80	98.10 ± 1.0	31.9 ± 1.0

Table 2. Concentrations of impurities (Atomic weight percent) found in virgin Pd after 3 weeks of electrolysis (EDS). * = Lower than measuring limit of EDS

5. J. Dash, G. Noble and D. Dimen, Cold Fusion Source Book, Russian Edition, Belarussian St. Univ., Minsk, 1994.
6. R. Bush and T. Eagleton, "Evidence for Electrolytically Induced Transmutation and Radioactivity Correlated with Excess Heat in Electrolytic Cells with Light Water Rubidium Salt Electrolytes," Proc. Fourth Internat. Conf. on Cold Fusion; vol. 3 - Nuclear Measurements, p. 2-1 to 15. Maui, Hawaii, Dec. 1993 (EPRI).
7. R. Notoya, "Alkali-Hydrogen Cold Fusion Accompanied with Tritium Production on Nickel," Proc. Fourth Internat. Conf. in Cold Fusion; vol. 3 - Nuclear Measurements, p. 1-1 to 13, Maui, Hawaii, Dec. 1993 (EPRI).
8. W. Greiner and A. Sandulescu, "New Radioactivity," Chem. Rev., 1990, March.

B. A MEETING OF DISSIDENTS

By Hal Fox

Flagstaff, Arizona. Several divisions of the American Association for the Advancement of Science are active in various parts of the United States. One of these is SWARM (Southwestern and Rocky Mountain Division). The SWARM meeting this year was held at the Northern Arizona University in Flagstaff, Arizona. Among the topics were several special sessions including the following: Ecological and Evolutionary Significance of Hybridization, Integrated Biological Monitoring of a Southwestern Desert

Riparian System, Plant and Soil Interactions in the Arid Southwest, The Hohokam Village Revisited, Real Science in Science Fiction, and **Suppression of Innovative Thought in the Academic World.**

This last session was organized by James DeMeo, John E. Chappell, Jr., Craig Gunnufson, Domina Eberle Spencer, and Thomas Love (members of the Natural Philosophy Alliance). Great credit must be given to the SWARM division of the AAAS for permitting both the special session on "Suppression of Innovative Thought" and for the annual meeting of the Natural Philosophy Alliance which was held from Sunday through Thursday, June 2-6, 1996 during the SWARM sessions.

The Natural Philosophy Alliance is currently headed by Dr. John E. Chappell, Jr. who did an outstanding job in handling all of the details for this NPA conference. The NPA has over 100 members all of whom are dedicated to making changes in the way in which new scientific information and discovery is handled by the academic community. Readers of this newsletter are well aware of the problems of acceptance of **really new scientific concepts.** We have seen the rejection by much of the scientific community of cold fusion, super motors, and devices that tap the energy of space.

The various sessions organized for the NPA by Dr. John E. Chappell, Jr. had a common heading of **New Frontiers.** Here is a list of the eight sessions:

- New Frontiers in Physics and Cosmology I. Philosophy, History, and Reinterpretation.
- New Frontiers in Physics and Cosmology II. Cosmology and Astronomy.
- New Frontiers in Physics and Cosmology III. Panel. The First Postulate of Special Relativity.
- New Frontiers IV. The Complex Realm of Aether Theory.
- New Frontiers V. Panel. The Electromagnetic Aether: What, How, and Whether.
- New Frontiers VI. Fields, Photons, and Aether.
- New Frontiers in Physics and Cosmology VII. Experiment, Theory, and Technology.
- New Frontiers VIII. From Quantum to Cosmos.
- New Frontiers IX. Length Contraction and the Lorentz Transformation Controversy.

This editor's contribution was in New Frontiers in Physics and Cosmology VII where the paper, "Five New Discoveries Best Explained by an Energetic Aether" was presented.

The NPA is composed of a combination of disappointed, determined, dedicated, daring, debunking, and defensive dissidents. They have one thing in common. They are dedicated to changing some (or many) of the misconceptions of modern science especially as related to the mathematics and physics of relativity and its denial of an energetic aether. Most of this group have been the victims of academic suppression of new ideas. Although many have left the academic community, many have chosen to stay within the ivy-covered halls of learning and pursue the task of correcting some of the misconceptions of mathematics and physics.

This authors' contribution was the fact that these dissidents have won the battle but not yet the recognition usually bestowed on the winner. **The suggestion was made that the academic community will, to a large extent, believe what they are funded to believe.** Therefore, it was suggested that we work together to develop the new aether technologies and use some of the profits to hire further academic development work. With that funding would, of course, come the acceptance of the reality of an energetic aether, and probably the realization that many of our strongly-held academic models are in need of revision. The following list of topics to be challenged was presented in this author's paper:

"As listed at the end of Chapter 2 in Pari Spolter's book Gravitation Force of the Sun, Einstein's general theory does not explain the following (which are some of the topics addressed in Spolter's book):

- ◆ The rotation of celestial bodies.
- ◆ The orientation of the axes of rotation of the planets.
- ◆ The orbital planes of all planets.
- ◆ The direction of rotation of the planets.
- ◆ The distance law.
- ◆ The eccentricities.
- ◆ The regression of the nodes.
- ◆ The precession of the equinoxes.
- ◆ The perturbations.

and the author of this paper would add the following:

- ◆ The variable nature of the speed of light.
- ◆ Magnetism and electrostatics.
- ◆ The red-shift.
- ◆ The anomalous production of both electrical and mechanical energy.
- ◆ Stability of elements.
- ◆ Inertia.
- ◆ **The Aspden Effect."**

Many of the papers presented in the NPA sessions dealt with and challenged the current concepts of gravity, relativity, the constancy of the speed of light, the Lorentz transformation, and especially the aether. The following is a list of some of the papers that may be of most interest to the readers of this newsletter:

ABSTRACTS of papers in Independent Sessions held by the natural Philosophy Alliance, in association with the annual SWARM/AAAS meeting, Flagstaff, Arizona, 2-7 June 1996.

Curt Renshaw (Tele-Consultants, Inc., Alpharetta, GA), "Simultaneity With and Without the Second Postulate."

AUTHOR'S ABSTRACT

The assertion of special relativity, that events simultaneous for one observer are in general not simultaneous for another moving relative to the first, flies in the face of intuition and common sense. This relative simultaneity lacks empirical evidence, whereas, the alternative presented here supports all such evidence to date. In place of the restrictions of Einstein's second postulate, Newtonian space-time and a relaxed second postulate are utilized. Also, an experiment utilizing the Pioneer spacecraft and earth-orbiting satellites is proposed which may judge conclusively on the validity of the second postulate of special relativity.

John E. Chappell, Jr. (San Luis Obispo, CA), "The Evans Critique on Simultaneity."

AUTHOR'S ABSTRACT

In 1962, U.S. philosopher Melbourne Evans of the Univ. of New Mexico published (in Switzerland, as censorship prevailed in the U.S.) a devastatingly decisive refutation of Einstein's renowned "thought experiment" which claimed that simultaneity depends on relative motion. Not only did Einstein illicitly transfer the calculations made by the at-rest observer to the point of view of the moving observer; but in different parts of his argument he gave directly contradictory values to the speed of the same light beam. Adding to Evans, I escape the reification inherent in special relativity by interpreting this thought experiment in terms of an electromagnetic aether.

Hector L. Bonilla (Philadelphia, PA), "Is the Aether the Reason for the Existence of Magnetism?"

AUTHOR'S ABSTRACT

Aether, the source of free energy, is a fluid whose motion is suspected of being the reason for the existence of magnetism. The "Weightless Fluid Thought Experiment" is presented in order to show that a magnetic field is a disturbance of aether which can be linked to gas fluid mechanics, where the fluid is the aether and aether motion the magnetic interaction. I show that light is neither wave nor particle. There is a catalyst that produces visible light; the light we see is being produced locally, and has not travelled from some distance source.

Steven Rado (Los Angeles, CA), "Magnetism and the Ideal Gas Model of the Aether."

AUTHOR'S ABSTRACT

Can we explain the attractive and repulsive forces of magnetism? Can we decide whether its force acts through empty space? The theory of **aethro-kinematics**, based on the *ideal gas model of the aether*, suggests some answers. Faraday's concept of magnetic lines of force as flow patterns in the aether leads to the conclusion that there is *no repulsion* between like poles, but if free to move, they simply rotate away by the torque of the oppositely flowing aether fields. The *attraction* of unlike poles is also a natural rotation of the flow fields of Aether, so that the flows join and form an *envelope* circulation, tending to take up a minimal volume of space.

Session G: Aether, Gravity, Inertia, and More.

Joseph L. McKibben (Los Alamos, NM), "Particles Considered as Standing Waves in a Superdense Aether."

AUTHOR'S ABSTRACT

The aether is comprised of an exceedingly dense gas pervading all of space and strictly obeying Newton's law. Its equations are those used for sound. The standing-wave amplitude drops off as $1/r^{1.5}$ - an unknown (?) solution that will be discussed. The mass of the particle is the displaced

mass of the aether, and so dualism is present. The need to maintain space-time phase at the particle centers leads to special relativity and to quantum mechanics. These ideas lead to quarks having component particles, which were somehow created initially, then converted into nucleons in stars.

Pari Spolter (Granada Hills, CA), "Gravitational Force of the Sun."

AUTHOR'S ABSTRACT

The gravitational force of the sun, derived from observations, is given as the product of acceleration times the area of a circle with radius equal to the semi-major axis of revolution. This quantity is constant for all planets, asteroids, and artificial satellites; it is independent of the mass of the attracted body. All celestial phenomena can be explained by classical physics; Einstein's general theory of relativity is not needed. The sequential mean distances of the planets from the center of the sun follow an exponential law, with a correlation coefficient of 0.997. It is concluded that gravitation is quantized.

Session H: Reinterpretation of "Time Dilation" Experiments.

Domina Eberle Spencer (Dept. of Math., Univ. of Conn., Storrs), Uma Shama (Dept. of Math., Bridgewater St. Col., Bridgewater MA), and Phillip Mann (Dept. of Math., Univ. of Conn.), "Interpretation of the Hafele-Keating Experiment."

AUTHORS' ABSTRACT

Hafele and Keating say that their 1972 tests using clocks going around the world in opposite directions (*Science*, vol 177, 1972, p 166, ff.) "provide an unambiguous empirical resolution of the famous clock 'paradox' with macroscopic clocks." To obtain a result consistent with the special theory of relativity, they use a linear extrapolation during the time of flight. This paper analyzes the original experimental data and shows that if a non-linear smooth curve is employed during the time of flight, there is no relativistic time difference. This agrees with the universal time postulate on the velocity of light (P. Moon, D.E. Spencer, and E.E. Moon, *Physics Essays*, vol 2, 1989, p 268 ff.).

Paul Marmet (Dept. of Physics, Univ. of Ottawa, Canada), "The Non-Reality of Time Dilation."

AUTHOR'S ABSTRACT

Before being able to decide whether time can be dilated, we must describe what time is: "Time is what clocks measure." We show that a standard clock can run at a different rate in different frames. If we are coherent with this definition, a frame having a clock moving at a slower rate will be interpreted as being submitted to time dilation. But it is not time dilation; it is a change of clock rate. There is no suitable known definition of time; yet relativists claim that this undefined thing can be dilated. The author will attempt a suitable definition of time.

George Galeczki and Peter Marquardt (both at Society for the Advancement of Physics, Cologne, Germany), "The Turn of the Tide: Recent Neo-Newtonian Physics in Europe (Germany)."

AUTHORS' ABSTRACT

Newton's physics relied on atomism, simultaneous equality of action and reaction at a distance, and absolute space. The fundamental formula of Ampère, "the Newton of electricity," was deleted from European physics in favor of Maxwellian "field theory." Even unorthodox (neo-Lorentzian) physicists like Bell and Vigier prefer a material aether instead of absolute space. The most prominent neo-Newtonian now in Europe is U.S.-born J. Paul Wesley. The revival of Newton's concepts apparently allows the overcoming of the crisis in physics caused by special relativity, "Copenhagen" quantum mechanics, and "Big Bang" theory.

John E. Chappell, Jr. (San Luis Obispo, CA), "Dissident Physics in North America, Europe, and the USSR."

AUTHOR'S ABSTRACT

Comparing and contrasting the two mid-century giants, American aether theorist Herbert Ives and Irish ballistic theorist Alfred O'Rahilly. Richard Waldron, working in the spirit of O'Rahilly. The long nadir of censorship in the U.S., leading to new journals and renewed strength among

dissidents. Dissidents in Central Europe outside Germany: Switzerland, Austria (Barth's journal), Czechoslovakia, Hungary. Hungarian emigrés in Brazil. Soviet ideology versus Einstein; and the post-Stalin thaw.

Josef Hasslberger (Roma, Italy), "Tetra Space Coordinates."

AUTHOR'S ABSTRACT

The Cartesian coordinate system based on 3 axes is the almost universal system of choice to describe location in space. But it is not optimal for describing natural structures. To describe all-space, we need to double the number of axes, to 6. Based on **Buckminster Fuller's** alternative geometry (in his *Synergetics*), the **author proposes a system of 4 axes, coordinated in 120-degree angles, which allows instant identification of direction with reference to only 3 out of 4 axes.** Such a system will be useful for space navigation, and for many other purposes such as crystal-based electronic information storage.

Robert B. Driscoll (Oakland, CA., and Instituto per la Ricerca di Base, Molise, Italy), "The Sagnac Effect: Isotropic Light Speed in the Co-Rotating Frame."

AUTHOR'S ABSTRACT

The Sagnac effect consists of 2 sub-effects: (1) due to the difference between the 2 light paths in inertial space, and (2) due to the Doppler effect. Each, according to Maxwell-Einstein theory, contributes the full observed fringe shift. This disproves that theory. If light speed is isotropic in the co-rotating frame of the interferometer, there is no sub-effect (1), and sub-effect (2) accounts for all the effects. The Sagnac effect is properly the Doppler-Sagnac effect. The neo-Ritzian theory, material relativity, allows the required isotropy in the co-rotating frame.

Laszlo Szego and Peter F. Ofner (Australia), "Hoek, Sagnac, and the Aether."

AUTHORS' ABSTRACT

From his unidirectional first-order experiment of 1868, M. Hoek claimed that the aether does not move relative to the

earth. But a new variation on this experiment may yield different results, more in line with those of Sagnac, who supported the aether concept with his 1913 rotational experiment. If Hoek's split light ray is sent parallel through glass and air in several directions, varying interference patterns will result when the branches of the ray are reunited, by which we could detect movement of the aether relative to a fast-moving robotic observer.

Robert S. Hannon (Sarasota, FL), "On the Velocity of Light."

AUTHOR'S ABSTRACT

Einstein's postulate on the velocity of light is compared with the kinematic model he uses as the premise of his 1905 derivation of his space and time transformations. Improper over-emphasis on kinematics leads to his model and algebra not agreeing with the commonly accepted interpretation of his postulate.

Sidney Bertram (San Luis Obispo, CA), "The Differential Forces of Electromagnetism."

AUTHOR'S ABSTRACT

Two relationships between moving and stationary clocks are obtained by ignoring an implied third postulate of special relativity - that all forces, whether transverse or parallel to the motion, result from a common transformation. The time changes are related to changes in the mutual energy between stationary and moving charges that lead directly to the forces associated with charge acceleration and the magnetic forces associated with the relative motion between charges.

Sidney Bertram (San Luis Obispo, CA), "The Lorentz Transform."

AUTHOR'S ABSTRACT

The Lorentz transform is derived by assuming that a particle interacts with a stationary target that it is approaching, through Huygens' sources generated in the local field that are excited by the plane wave associated with the particle. The Huygens' sources form conical

waves that converge on the target. The derivation shows that the transform is an orthogonal conical transformation whose primed coordinate is associated with the stationary target.

Roland H. Dishington (Pacific Palisades, CA), "The Conservation Law."

AUTHOR'S ABSTRACT

Lack of understanding of what is conserved in baryon and lepton interactions emphasizes the same lack of understanding of the classical laws, since no one knows what "energy" or "momentum" are, for example. Using small, significant modifications of the definitions of electric and magnetic energy densities, it appears that the multiplicity of conservation laws becomes a *single* conservation law, producing all of the effects now ascribed to the many; and the nature of what is being conserved is indicated.

Thomas E. Phipps, Jr. (Urbana, IL), "The 'VACE' Puzzle: An Interim Report."

AUTHOR'S ABSTRACT

The Virtual Ampère Current Element (VACE) is a device thought up by Reginald I. Gray, a toroid of permanent magnetic material, which seemed to offer an easy way to resolve, experimentally, the eternal stand-off between Lorentz's and Ampère's laws of action between current elements. Investigations by the author have so far not justified this hope, but more possibilities remain that may eventually yield a decisive experiment. In the meantime, we at least have an interesting puzzle and what may prove to be an everyday analog of the Aharonov-Bohm effect.

MEMBERSHIP IN THE NATURAL PHILOSOPHY ALLIANCE

If you are interested in joining the NPA, send \$20 made out to Natural Philosophy Alliance, to John Chappell, Jr. 1212 Drake Circle, San Luis Obispo, CA 93405.

C. COLD FUSION CONSIDERED ON NPR

Courtesy of Steve Roen

Dan Charles interview on National Public Radio's *All Things Considered* program.

Date: Saturday, 1 June 1996, 5 p.m.

National Public Radio presented this interview, introducing it as a topic of interest, an improbable dream-come-true of a world of "no more energy shortages, no more high gasoline prices. That dream has fueled the work of a handful of researchers who believe in something called **cold fusion**. It's a complicated idea, it involves the fusion of atoms and the subsequent release of enormous amounts of energy. All accomplished in a controlled and friendly environment. And it's controversial. So controversial that most scientists don't even think that cold fusion is possible. Despite the skeptics, the search for cold fusion goes on and here is Dan Charles' report."

Dan Charles: "The company E-Quest Sciences is tucked away in a row of modest offices along a low-rent commercial strip in Mountain View, California. It's a two person venture, Russ George and a partner. George explains the "E" in E-Quest stands for energy. The "Quest" for it involves what's going on inside a small steel cylinder only a few inches in diameter, in a back corner of the company's garage-size workroom.

Russ George: "We have several different pieces of apparatus here. One of them is a rather noisy one so we have it in a semi-sound proof booth here. So if I open the door, you can start to hear it."

Dan Charles: "Inside that steel cylinder there's a wafer of metal suspended in an unusual form of water called **heavy water**. It's being subjected to a blast of ultrasound, a sound that's too high in pitch for the human ear to pick up. The ultrasound causes the rest of the equipment to vibrate, and that is what we can hear."

Russ George: "What we are doing is producing very intense bubbles in a very small volume of heavy water. In this experiment right now, there is actually a piece of titanium, also in there with the heavy water, which is the target."

Dan Charles: "Somehow, George says, the ultrasound and those bubbles are causing strange and wonderful things to happen inside the metal wafer target."

Russ: "The neighbors complain if we don't keep the door shut."

Dan: "George points to a chart on the wall, it records how much electrical power goes into his apparatus and how much heat comes out."

Russ: "These are some particular runs that we ran here, and at some of the points here, where we were putting in only something like 100 watts of equivalent acoustic energy, we were reaching the same temperature that a 300 watt electrical input required."

Dan: "In other words, George says this apparatus produced 3 times as much energy as it consumed. That's not all he says. He pulls out a photograph, a highly magnified view of one of his metal wafers after it came out of the experiment. This one is made of palladium. George points to one feature on the surface, something that looks, for all the world, like a tiny cone-shaped volcano. Around it the metal looks glassy and smooth as though its been melted."

Russ: "And everyone we've shown this to has said, well you know that's definitely a melting event. And something very energetic took place deep in the metal that exploded out like a volcano."

Dan: "George is convinced what happened inside the metal was a nuclear reaction of some sort. Heavy water contains a form of hydrogen called deuterium and George suspects two deuterium atoms fused, releasing energy. This is the essential claim of so-called **cold fusion** -- that nuclear fusion can happen at room temperature. It's a claim that was first made seven years ago by two scientists at the University of Utah, Stanley Pons and Martin Fleischmann. Many scientists dismissed the Pons and Fleischmann announcement from the start, calling it absurd. Nuclear fusion is what powers the sun or hydrogen bombs. Scientists have spent fifty years trying to harness the power of nuclear fusion for the good of humankind. They've spent billions of dollars on massive laboratories that subject various forms of hydrogen to the heat and pressures of the sun, creating for an instant real nuclear fusion. Everything they've learned teaches them you cannot do this in your garage. Other scientists, slightly more willing to believe it was possible, scurried to their laboratories. Malcolm Fowler, from Los Alamos National Laboratory in New Mexico, says he mainly tried to detect any evidence there really was a nuclear reaction going on, nuclear products like neutrons or gamma rays, or a gas called tritium."

Malcolm Fowler: "We initially thought there was some indication that there might be some neutron emission, which would have been the real smoking gun. As it turned out, as we started looking closer and closer at the problem, you know, the effect that we thought we were seeing keep getting smaller and smaller."

Dan: "The same thing happened when his colleagues tried to measure heat production."

Malcolm: "As far as we could ever tell, the amount of energy that came out was exactly the amount of energy put in."

Dan: "That experience was repeated in laboratories all over the world. After a few months, most scientists decided cold fusion was just a set of bad measurements from poorly conducted experiments. But this was no ordinary scientific disagreement, it turned into something closer to a religious battle between believers and non-believers. The non-believers in cold fusion, most scientists, treated it not just as error but as a betrayal of science, something closer to heresy. That only caused the believers, researchers like Russ George, to pursue their work with special fervor. Establishment scientists sometimes said they behaved a little like members of a cult. The believers in cold fusion, these heretics, experience something like excommunication. Major science journals won't publish their work and when large scientific associations meet, you won't find a session on cold fusion. Russ George?"

Russ: "Yea, it is somewhat lonely, you know, in this field. Although a good friend of mine quipped to me a couple of years ago at one of the cold fusion conferences, that one of the best things about this field is that all the gray men and women of science were long ago scared out of the field. So, at least, there are not too many boring people that we run into who are actually working in the field, who are just pedantic cookbook scientists. This is a field populated by people with passion."

Dan: "Pons and Fleischmann have gone into scientific exile. With generous support from a private Japanese funder, they have set up a new cold fusion laboratory in the south of France. But cold fusion has not been completely driven out of major scientific institutions. Three scientists at Los Alamos, recently claimed they have observed traces of tritium in experiments involving deuterium and palladium. That could be a sign fusion really is happening. Other researchers are trying out slightly different material, levels of power, trying to figure out, for instance, why an experiment sometimes seems to work and sometimes does

not. These experiments, they say, are done carefully and competently.

Michael McKubre: "I am an experimentalist. I do an experiment as well as I can, and I observe the results."

Dan: "Michael McKubre is an electrochemist at SRI International, a large private research institute in Menlo Park, California.

Michael: "We seldom make any grandiose claims or projections as to what this might be due to or what this might be good for."

Dan: "McKubre's laboratory is a far cry from the casual chaos of E-Quest Sciences, where something as simple as a hot day can throw off the temperature measurements. McKubre has the best equipment money can buy, paid for by Japan's Ministry of International Trade and Industry. The room is kept a constant temperature, so are the steel cylinders inside which nuclear fusion may or may not be happening.

Michael: "We operate them under computer control, very elaborate preparations taken to ensure that the measurements that we make, which are mostly currents, voltages, and temperatures, are measured accurately."

Dan: "Yet, McKubre, for all his caution, is still a cold fusion heretic. He doesn't like the term *cold fusion*. "That assumes we know what is going on," he says, "and we don't." But he is convinced there is something remarkable going on inside the steel cylinders in this lab. For every watt of power that goes in, he sometimes measures anywhere from 1.1 to 1.5 watts of energy coming back out, and this may last a week or more. The source of this heat is a mystery, he's seen no neutron radiation or tritium or consistent production of helium.

Michael: "If there is a nuclear process, obviously there is a nuclear product, and one must be able to find it. And so far we have not."

Dan: "McKubre's ambition is to bring this field back within the fold of mainstream science. He wants to build a demonstration device to prove that this phenomena, whatever it is, is real."

Michael: "Peoples' attention needs to be grabbed by something that's simple, unarguable, concrete and rugged. It has to be simple enough to explain it to the average

person or average politician. And it really has to be a lot more robust than anything we have generated so far."

Dan: "If he succeeds, McKubre says it may very well set off the same furor -- the same insanity, he calls it -- that occurred seven years ago."

Michael: "The result is so stunning, so astounding, so unexpected, that I don't think there is any gentle way you can introduce to people the fact that you have performed an experiment, the results of which are [deemed to be] impossible but, nevertheless, it occurred."

Dan: "That possibility may be a big part of what keeps people like McKubre and Russ George going. It's the scientist's dream, to prove, like Galileo or Copernicus or Einstein, that you are right and the whole world has been wrong. Even better, you might reveal a source of boundless energy for the planet. Skeptical scientists, like Malcolm Fowler at Los Alamos, say that dream can be dangerous."

Malcolm: "One of the problems is that the carrot hanging out there is so large that it tends to encourage wishful thinking."

Dan: "Fowler, at least, does try to follow what's going on in this field. He thinks it's too bad cold fusion researchers got expelled from the halls of respectable science the way they did. The walls are coming down a bit now, he says, researchers like McKubre don't talk about cold fusion, they just report unexplained productions of heat. That's a modest enough claim for other scientists to take seriously, Fowler says, and if enough of them look into it maybe they will finally agree on what, if anything, is going on inside those little steel cylinders. This is Dan Charles reporting."

D. NEWS FROM THE U.S.

CALIFORNIA - NEW ENERGY OVERVIEW

Patrick G. Bailey and Toby Grotz, "A Critical Overview of the Available Information Regarding Claims of Zero-Point Energy, Free-Energy, and Over-Unity Experiments and Devices," *The AEN Newsletter*, vol 3, no 1, March 1996, pp 1-7.

AUTHORS' ABSTRACT

A summary review is presented of the experiments, motors, generators, devices, and demonstrations that have been

reported in the past few years to produce near-unity or over-unity operation. The concepts of free-energy, zero-point energy, and over-unity devices are not new, and many examples of such devices have been built within the last 100 years. 26 researchers are reviewed and 11 are selected for immediate interest and support. Whether a new form of potential energy can be demonstrated and successfully utilized within the near future for the ultimate benefit of the human race remains to be seen.

EDITOR'S COMMENTS

To show how fast the new energy field is changing, almost none of the "11 selected for immediated interest and funding" are considered to be current strong contenders for commercialization. Note that the Bailey-Grotz paper was originally presented in *New Energy News* (vol 1, no 6, Oct. 1993, pp 13-19). We are pleased to welcome the *AEN Newsletter* to our list of friendly publishers of new energy information.

FLORIDA - SANTILLI'S HADRONIC ENERGY

Shannon D. Smith (Research Assoc., Inst. for Basic Research, Palm Harbor, FL), "Santilli's Clean, Subnuclear, Hadronic Energy, Recycling of Nuclear Waste, and Quantitative Treatment of New Energies," Proc. Internat. Symp. on New Energy, April 25-28, 1996, Denver, CO, pp 395-414, 16 refs.

AUTHOR'S ABSTRACT

We outline the following three topics:

1) Hadronic Energy. Neutrons are large reservoirs of energy which is released spontaneously via beta decay. The hadronic energy, recently identified by the American physicist R.M. Santilli, deals with mechanics in the interior of the neutrons (thus being of subnuclear type), which are capable of tapping such energy with current technology. Theoretical and experimental studies on the hadronic energy currently going on in the USA, Europe and Russia are outlined.

2) Recycling of nuclear waste on site. New forms of energy generally contain the basic principles for the recycling of nuclear waste inside the water pools of nuclear power plants, thus avoiding the need for transporting and storing the waste in a site yet to be identified which, according to official DOE estimates, is expected to cost 230 billion dollars during the next five years. For instance, the capability of stimulating the decay of the neutron of hadronic energy implies the

capability of recycling on-site nuclear waste via its stimulated decay.

Similar capabilities of waste recycling on site are expected for other forms of energy, including cold fusion.

3) Quantitative treatment of new energies. All conceivable forms of energy permitted by relativistic quantum mechanics (RQM) were exhausted during the first half of this century.

To be truly "new," a form of energy must necessarily be beyond the capabilities of RQM. When at Harvard University in the late 1970's under DOE support, Santilli proposed a broadening of RQM called "relativistic hadronic mechanics" (RHM), which can provide a quantitative representation of interactions due to mutual wave overlappings which are *nonlinear* (in the wavefunction), *nonlocal* (because extended to a region) and *nonpotential* (because of contact character), thus being outside RQM. The hadronic energy is numerically predicted by RHM and *not* by RQM. RHM is also expected to provide quantitative treatments of cold fusion and other new energies. In fact, nonlinear, nonlocal, and nonpotential interactions can produce *attraction* among particles, nuclei or atoms of the *same* charge, as established in the neutron structure, superconductivity, chemical bonds. Thus, RHM provides a rigorous explanation how cold fusion processes can be initiated even against repulsive Coulomb barriers.

NEVADA - A TRIO OF THEORIES

Robert W. Bass, (Innoventech, Inc., Pahrump, NV, Technical Advisory Board, Fusion Information Center, Inc., Scientific Advisory Board, ENECO, Inc., Salt Lake City, UT), "Quantum Resonance Transparency (QRT), Zero Point Fluctuations (ZPF), and Lattice Induced Nuclear Transmutations (LINT)," to be presented at ICCF-6.

AUTHORS' ABSTRACT

This work generalizes the author's previously-presented cold fusion theory (QRT/ZPF/LINT) to predict fusion-fission reactions involving protons &/or deuterons and the nuclei of metals comprising a lattice supersaturated with hydrogen isotopes. The claimed **unique** virtue of the earlier versions (Poster Papers at ICCFs 2, 4, & 5) is that they provided the **only** theory which quantitatively discriminates predictively between palladium and nickel lattices loaded with protons or deuterons as to the probability of **inelastic** collisions of **excited** resonantly-transmitted, positively-charged nuclei with **bound** positively-charged nuclei. Prior versions considered only the embedded hydrogen-isotope lattice but now the embedding metallic lattice is included.

E. NEWS FROM ABROAD

AUSTRIA - LATEST *DEUTSCHE PHYSIK*

Courtesy of Stefan Marinov, Editor

FF EDITOR'S REVIEW

Stefan Marinov is a scientist with a purpose. The purpose is to correct many of the errors being taught by tradition-bound academia. Marinov is multi-lingual, therefore, you will find original articles published in both German and English with quotes in Italian, Russian, Greek, or whatever language is appropriate. For example, in this June 1996 issue, Marinov's editorial begins with quotes in German, Italian, Russian, and English. The translation of the Russian quote is: *"If you find no difficulties on your path through life, you have lost your way."*

The contents for this vol 5, no 18 include the following:

Editorial by Stefan Marinov lauding the international conference, "Descartes and Scientific Thought" to be held in Perugia, Italy, September 4-7, 1996. No mention is made of the language of the conference but it probably will be Italian with English translation. Contact person for "Europe" is our friend Josef Hasslberger, Rampa Brancaleone 25, I-00165 Roma, Italy. Tel +396 637-4160, Fax 637-2196. Marinov notes: "...where the contemporary state of science is critically examined and where unlimited freedom is given for presenting falsifications of existing theories and for presenting new theories and experiments."

"Last Experimental Steps Before Running the Double Magnet SIBERIAN COLIU Machine as a Perpetuum Mobile," by Stefan Marinov. This is Stefan's report on his latest perpetual motion device.

"Marinov Vector and Scalar Magnetic Intensities Generated by an Infinitely Long Ring SIBERIAN COLIU Magnet," by Stefan Marinov. This article shows the calculations that have lead Marinov to be quite sure that a perpetual motion machine can be constructed.

"Easy Experiment for Establishing the Existence of Magnetic Kind of Energy in Gravitation," by Stefan Marinov. Here is the abstract: "After presenting the fundamentals of my gravitational and electric theories based on the concepts of absolute space-time, I reconsidered a previously proposed experiment. By making a more detailed technical analysis, I show that with the help of such an experiment one can easily establish the existence of a gravitational analogue to magnetic energy and measure the absolute velocity of the

Earth." Marinov concludes this interesting concept with: "They [his proposed cosmic speedometers] will be used not only in cosmonautics but, if coupled with respective computers which will take into account Earth's absolute, orbital and axial motion, also as **reliable** speedometers on ships and planes giving the vehicle's velocity **with respect to the Earth's surface.**"

"Has Osamu Ide Observed a Violation of the Energy Conservation Law?" by Stefan Marinov. The abstract is: "After presenting shortly the recent electromagnetic motor of Osamu Ide, I show that it is a repetition of the historic Edwin Gray's pulsed capacitor discharge electric engine. Similarly as Gray, Ide has observed a violation of the energy conservation law, due to the appearance of induced forth electric tension. I show that forth electric tension is induced in every electromagnetic generator and motor when the phase difference between tension and current is near to 90 degrees, and I report on simple experiments where induced forth tensions lead to a patent violation of the energy conservation law." Marinov loves to discuss experiments that demonstrate violations of scientific laws.

The last several pages of this issue contain reprints of a series of letters between Marinov and several editors of scientific journals. **These letters demonstrate the obstinacy of many journal editors who refuse to publish articles contrary to accepted scientific dogma.**

BRITAIN - SEARL ANNOUNCEMENT ON INTERNET

received 12 June 1996

SPECIAL ANNOUNCEMENT FROM PROFESSOR JOHN R.R. SEARL

The following information has been approved for publication by John R.R. Searl in a telephone call with the Editor.

London Report by Brad Lockerman

At the seminar, Middlesex University London, England, on March 10, 1996, Professor John R.R. Searl revealed for the very first time the secret of Searl technology. This is something he has known for fifty years.

On this occasion Searl chose to approach his audience strictly on a scientific level. He used readily available common measuring instruments such as the oscilloscope to prove his discovery.

The spike shown on the oscilloscope screen proves conclusively that a charge does exist when a specific combination of elements are pressed and formed in a pre-

designated fashion. In this case, a charge of three volts every five milliseconds, repeatable. One of Searl's associates was able to measure a charge of twelve to fifteen volts repeatable, from his section of the SEG.

He starts with one segment built to his specifications. He then touches one probe from the oscilloscope to the center of the segment, the other probe is touched to the outer ring of that segment. The result is shown as a spike or peak on the oscilloscope screen.

The circuit is moving through the layered elements in the segment. The segment shows a negative potential. That is, a release of electrons is evidence of charge.

This phenomenon will set the scientific world on its ear. It shows that you can draw power from the surrounding space fabric, the area around the segment. It will continue to pulse just by using the elements. There is no photoelectric effect. It is not a solar cell. It is not a conventional capacitor. There is no energy input into it. Yet it is giving out energy, consistent and repeatable, that is, energy from the surrounding space fabric.

In fact, the energy is all around us. It exists in the surrounding space fabric. The segment emits an electron flow by tapping the potential of this surrounding space fabric. This means that there is a source of electrons that is being transmitted from the inner core of the segment to the perimeter of that segment in a continual release. Thus conclusively demonstrating how to access the energy all around us, the unlimited energy of the universe.

We telephoned Prof. Searl. He stated that they have made some wonderful discoveries in the field of magnetics which will be released later. We strongly commend Searl for his decision to make some of the technical details of his work public. This information was released to the Internet on June 11, 1996. Ed.] (Used by permission ©MLEE)

CANADA - P.A.C.E. - 20 YEARS OF ENERGY

A. Michrowski (President of P.A.C.E), "The Planetary Association for Clean Energy, Twenty Years of Science," *The AEN Newsletter*, vol 3, no 1, March 1996, pp 8-12.

AUTHOR'S ABSTRACT

The Association is now entering its 20th year of existence. It began as an initiative by Hon. Chesley W. Carter, chairman of the Canadian Senate Standing Committee on Health, Welfare and Science, "to encourage maximum

utilization of science and technology to the problems that face us... to keep [ourselves] as well informed as possible about what was being done in this respect, particularly with regard to the development and possible application of new technology, new devices and new approaches to current problems." [P.A.C.E. is a non-profit, charitable corporation whose objectives are to facilitate the discovery, research, development, demonstration and evaluation of clean energy systems.]

ITALY - PALLADIUM LOADING TECHNIQUES

Francesco Celani, Antonio Spallone, Paolo Tripodi, Alessandra Petrocchi, Daniele di Gioacchino, Massimiliano Boutet (INFN, Lab. Naz. di Frascati), Paolo Marini, Vittorio de Stefano (SKITEK, IRI, Pomezia), Marco Diociaiuti (Rome), and William Collis (PCS, Ltd., Asti), "Reproducible D/Pd Ratio >1 and Excess Heat Correlation by 1- μ s-Pulse, High-Current Electrolysis," *Fusion Tech.*, vol 29, no 3, May 1996, pp 398-404, 7 refs, 7 figs.

AUTHORS' ABSTRACT

A high-current (up to 100 A), short-pulse (1- μ s duration) electrolysis technique is presented that permits high loading (D/Pd up to 1.2) of deuterium in palladium cathodes. Several different cold-worked palladium plates were used as cathodes, and some underwent surface treatments (oxidation or addition of intermetallic compounds). The surface-treated plates showed atypical deuterium absorption dynamics, and the D/Pd loading ratio exceeded 1. Moreover, during initial loading these cathodes showed anomalous excess heat (up to 80%) far greater than the absorption enthalpy. The pure palladium surface plates did not show this effect.

AUTHORS' CONCLUSION

Independent of the metallurgy of the palladium cathodes, we have developed a high-pulse technique to load high concentrations of deuterium in palladium (D/Pd>1.1). However, surface treatment of the plates affects the absorption rate shape parameter (thin PdO films or palladium-boron compounds). Various palladium plates were tested, and these processes occurred in similar (reproducible) ways.

The absorption kinetics are particularly interesting. In our opinion, the absorption rate is a more reliable parameter than the D/Pd value for predicting the production of excess heat. Our techniques seem to give reproducible methods for loading palladium with deuterium.

JAPAN - MORE HEAT & HELIUM

Hideo Kozima (Dep. Phys., Fac. Sci., Shizuoka Univ.), "Excess Heat and Helium Generation in C.F. Experiments," *"Cold Fusion,"* issue 17, May 1996, pp 4-7, 15 refs, 1 fig.

AUTHOR'S ABSTRACT

The simultaneous generation of excess heat and helium-4 (^4He), observed several times in experiments, is explained in Trapped Neutron Catalyzed Fusion model of cold fusion. Qualitative consistency of the explanation with other cold fusion phenomena substantiate the reality of TNCF of hydrogen isotopes in solids.

JAPAN - ANALYSIS OF PPCTM BY TNCF

Hideo Kozima (Shizuoka Univ.), "Analysis of Patterson Power CellTM by TNCF Model," *"Cold Fusion,"* issue 17, May 1996, pp 8-11, 11 refs.

AUTHOR'S ABSTRACT

The experimental data on the Patterson Power Cell (PPC) are analyzed in which 3.8 times higher excess power than input power was produced. More recent reports are of the excess energy elevated up to 10⁵% of the input energy with good qualitative reproducibility. A model I proposed before, the TNCF model, is used as a basis of the analysis. The result gives an interpretation of PPC data consistent with several data analyzed before on the isotope shift, and on the excess heat and helium production obtained in electrolysis experiments.

JAPAN - EXPLANATION OF O/U ENERGY

Hideo Kozima (Shizuoka Univ.), "Excess Energy Data in D/Pd System Examined," *"Cold Fusion,"* issue 17, May 1996, pp 12-14, 9 refs.

AUTHOR'S ABSTRACT

One of the most elaborate experimental data in cold fusion experiments have shown a semi-qualitative relation between the excess energy Q , D/Pd ratio x in the sample and electrolyzing current density i . The relation was investigated on the TNCF model and a qualitative explanation was given consistent with other experimental data in cold fusion.

JAPAN - LOW SPEED NUCLEAR FUSION

Norio Yabuuchi (High Scientific Res. Lab.), "Low Speed Nuclear Fusion," *"Cold Fusion,"* issue 17, May 1996, pp 16-19+, 29 refs, 9 figs.

AUTHOR'S ABSTRACT

Present-day atomic theory began when Boltzmann introduced the philosophy behind the atomic theories of Greece's Democritus into thermal dynamics. Just as Heisenberg introduced the philosophies of Plato and Aristotle when establishing his quantum theory, so has the author also introduced Platonic and Aristotelian philosophy.

Atomic nuclear structure as a combination of Plato's regular polyhedrons is one such instance of this philosophy. Another is the philosophy that molecular structure and nuclear structure are in what Aristotle terms an analogous relationship. An attempt was primarily made to create, by means of this philosophy, a theory of nuclear fusion due to low-speed collision.

F. SHORT ARTICLES

TINY BUBBLES

Chuck Bennett (Am. Pure Fusion Engr. & Supply)

The great mystery surrounding cold fusion has been unraveled. Dr. Roman E. Sioda of the Institute of Industrial Organic Chemistry in Warszawa-Zeran, Poland, has proposed a theory based on fundamental physics describing the formation of nano-sized bubbles in deuterated or hydrogenated materials. Dr. Sioda's analysis shows how the temperatures within these micro-sized bubbles can exceed 100,000° Kelvin. Molten metal transforms to a small plasma where fusions and transmutations can take place.

These temperatures are not in the billions that are alleged to be necessary for hot fusion to succeed. However, there is a miniature magnetic firestorm that accompanies the formation of the bubbles. A new concept called "nano-magneto-hydrodynamics" evolves to supply the additional confinement power to produce miniature mass-energy conversions.

Experimenters armed with this theory can revisit attempts to replicate Pons and Fleischmann's original experiment. Previous failures to replicate did not achieve the nano-bubble state in metal lattices. This is because insufficient energetic triggers were absent when metals such as palladium were saturated with deuterium. Many times when catastrophic

destruction of the electrodes occurred, the experimenters mistakenly blamed the results on conventional mechanisms.

Now, we have discovered that metals such as nickel will create a reaction that yields tremendous energy with the use of ordinary hydrogen. Nano-bubbles that induce energy producing transmutations and fusions are suspected to be the root cause of the excess energy. The design for these devices can be iterated to maximize the power output with Dr. Sioda's new theory.

At maximum power, each nano-bubble is like a miniature sun. This is just the type of fusion condition that has been sought by the expensive Tokamak or the Nuclear Ignition Facility. The nano-bubble is truly a miniature Tokamak fusion generator that forms a spherical vortex of plasma. The vortex not only induces energy-rich transmutations and fusions, but also eats up the nuclear debris that is expected by traditional physicists.

Just as the beginnings that led to powerful personal computers as we know them today, success in fusion energy devices may come from cold fusion pioneers working out of a garage. Our world is rapidly depleting the available reserve of hydrocarbon fuels. And the pollution levels of our ground, water, and air are becoming unmanageable. A new energy source is needed for an urgent solution to the decay in our quality of life.

There were many unsuccessful attempts at prolonged flight before the Wright Brothers succeeded. The development of cold fusion had a rocky start but the secrets to successful energy production are rapidly unfolding. New technology and new industries should spring up everywhere. Isn't it time that our government and business leaders listened to new ideas for a new future?

G. LETTERS FROM READERS

LETTER FROM GERMANY

May 11, 1996

TESTING OVER-UNITY DEVICES IN GERMANY.

A two-hour discussion with a high ranking official and his group in Dusseldorf (the capital of the state Northrhine-Westfalia, which is, with some 17 million inhabitants, the largest state of Germany) has recently brought the following good result:

The State Ministry of Economic Affairs, Technology and Transport in Dusseldorf is willing to support activities in

which an over-unity device (or perhaps two or more) is tested by specialists at a Northrhine-Westfalian university or research institute.

A positive test result will be a breakthrough in matters of "New Energy" in Germany and a tremendous support of the device tested successfully (great publicity, etc.). A negative test result would be disastrous in many respects. For these reasons, the test has to be planned and carried out very carefully.

We plan to coordinate and accompany these testing activities in Northrhine-Westfalia, (and perhaps also in other States which might provide similar support of the "New Energy" field).

Please let us know soon whether you could supply one or more devices for testing. If yes, please give detailed information which may help us in planning and carrying out successfully the intended tests. A negative test result would be a great problem as you can imagine.

Below we specify a few points which may help us in Germany to test your device successfully and to support thereby this device in particular and Space Energy Technology (SET) in general.

1. We believe that it is absolutely necessary that you provide as much information about a proper test of your device as available. This may mean, for example:

The leaders of the test group and we as coordinators are instructed in detail (preferably in your laboratory) before the testing in Germany begins.

We receive results of previous tests, a brief description of the testing procedures used, the name and address of the testing person or group; in case that differences in test results may be due to differences between or among versions of the device tested, it would be helpful to receive from you information about such differences.

2. If there are video cassettes of your device, please send us soon some copies: two in the American system (NTSC), some 6 or more in the European/German PAL format if available.

3. We receive from you the patent documents in full length.

4. Please, state your financial and legal conditions clearly, in a detailed manner.

5. We are sure that the German test team(s) insist(s) on an agreement with you to publish the test results (with or without prior statistical analysis of the data).

We look forward to your prompt reply.

Sincerely yours,

Prof. Dr. Josef Gruber
Chair of Statistics and Econometrics
Dept. of Economics, Univ. of Hagen
and
Diplomat W. Bahmann
European Secretariat of PACE
and International Committee of INE

EDITOR'S COMMENTS

(Portion of a letter sent to Prof. Gruber) Although we will be pleased to help, the following message should be shared with German scientists:

We wonder why the renowned scientists of Germany are so embroiled in outdated scientific models that they have ignored the vigorous developments in cold nuclear fusion and other enhanced energy technologies. If they are too busy protecting outmoded theories, why should scientists in other countries be concerned about their intellectual welfare? Japan does not have this problem and the so-called "new-hydrogen energy" (cold fusion by another name) is now being commercialized in Japan as well as in the U.S. From few to none German scientists have attended the previous five International Conferences on Cold Fusion. Have German scientists let *Nature* magazine and Douglas R.O. Morrison do their thinking for them?

Hal Fox, President
Fusion Information Center

LETTER FROM JEANE MANNING

May 22, 1996

Environmentalists Misinformed about Emerging Energy Technology.

The frustration that comes from speaking with the **experts** — experts on yesterday's energy-technology paradigm — is a feeling that I've had to shake off all too many times lately, and it lingered after I hung up the phone this morning.

I was requesting information from a top researcher at Greenpeace Canada headquarters in Toronto. The expert on

global climate change was helpful and agreeable; he's aware that Canada's prime minister "**represents the dinosaurs**" regarding technology for generating power. However, the tone of the conversation changed when I mentioned what I see as "good news for the Planet" - that research on what is called cold fusion is thriving in laboratories all around the world.

He said he'd read "scientific writings" but it sounded like he'd been reading the negative Huizenga/Taubes books, or magazine articles which give the impression that cold fusion researchers "deliberately misrepresent" their results and don't practice good science.

I asked if he'd heard about James Patterson's successful invention or other new developments in what the Japanese call New Hydrogen Energy. Then the Greenpeace researcher said he resents the money that goes to such efforts (**I didn't get a chance to ask: "What money? In North America, certainly NOT taxpayers' money."**) He resents any effort put into new research because "we already have the alternatives ready to use - solar, wind and biomass." My phone bill and an incoming call prevented me from staying on the line to convince him to look at the emerging energy technologies that, if developed, could far outperform those traditional alternatives.

Is there a fear underlying the anger of entrenched academics -- a subconscious fear that the New could cause the Old to become obsolete? I contend that long-time environmentalists sometimes develop closed minds, just as do long-time experts on any topic. Any messenger-for-a-new-worldview, coming along with information that seems to oppose the experts' bodies of accepted knowledge, is resented. The messenger is experienced as an irritant or an antagonist, depending on how closed-minded the expert is.

My sympathies are certainly with those people who have devoted their careers to saving this planet's ecosystems. **Does anyone have any suggestions on how to build bridges to them verbally - how to detour around their resistance to topics such as cold fusion?** If only we all had Gene Mallove's and Hal Fox's speaking ability! I'm heading to my nearest Toastmasters' Club, because we have to convey the good news in time to clean up this planet!

Jeane Manning, author of [Angels Don't Play This HAARP](#) and [The Coming Energy Revolution](#).

TO EDITOR FROM EDITOR

Dear Editor Wayne Green,
Cold Fusion newsletter

In your editorial, "Making a Mess," *Cold Fusion*, May 1996, issue no. 17; you make the following statement:

I'm no fan of the government doing anything more than a bare minimum of running things. But in this case, where there are humongous vested interests threatened, it's unlikely that private industry is going to do anything other than impede progress. Well, if you were a top executive in a power, oil, coal, or other energy generating or distributing company, wouldn't you do your best to stop progress in a product that fares well to put your company out of business within a few years?

Here is another view: The utilities cannot afford to build new power plants in the U.S. and follow all of the clean-air regulations from the EPA. If they did, says one expert, they would have to charge \$0.40 per kilowatt hour. Oil executives have stated that they would sooner keep their oil in the ground to sell later as chemical feedstocks rather than pump it to burn. Forty years of remaining oil at present energy demand growth rates is the world-wide supply. I'll admit that the coal companies are the most threatened. However, I suggest that you will find that **it will be the private companies in America that develop new-energy devices and systems. So please don't tar us all with the same brush.**

Sincerely,

Hal Fox, President, Fusion Information Center & Editor of *New Energy News & Fusion Facts*.

H. BOOK REVIEWS

NEW ROLE FOR MAGNETIC SCIENCE

By Hal Fox

Elsewhere in this newsletter is a dramatic announcement by Professor John R.R. Searl, the inventor and developer of the Magnetic Levitating Disks [see page 12]. After fifty years he has now shared information about the construction and the effect of his special magnetic materials to produce a voltage from tapping the energetic aether. Prof. Searl promises more astounding announcements of discoveries concerning magnetic science.

Several of the new devices that are being prepared for commercialization use magnets. The advent of new super

magnets (such as the Takahashi super magnet) will undoubtedly have a favorable impact on the development (and re-development) of various types of magnetic motors and other devices. A group being funded by the Fusion Information Center (FIC) plans to market a magnetic kit that will have a variety of magnets and, more important, a large array of magnetic experiments that can be performed. FIC believes that it is important to have more individuals involved in the rediscovery of magnetic science.

Although it has been over 2,000 years since Magnes lost his shoe when the nails stuck to a strong lodestone, magnetism still has not been fully understood. For example, it is this author's belief that a magnet would not work in the absence of an aether. It is important that we re-examine our concept and model of what magnetism is. Another erroneous concept of magnets (according to this editor) is that magnetic forces exhibit **action at a distance**. It is suggested that an improved model of magnetism will show that the magnetic poles and therefore the magnetic forces are formed in the flowing and aligned aether **external to the magnets** and that the forces generated are local and not action at a distance.

These new ways of looking at magnetic science are not shared by current textbooks. In a search for good experiments for youth to learn more about magnets, the following book was purchased and is recommended to the lay readers of this newsletter.

Magnet Book Review.

Glen Vecchione, Magnet Science, c1995, published by Sterling Publishing Company, Inc. 387 Park Avenue South, New York, NY 10016, 128 pages, illus., glossary, indexed.

This book is written for any bright young-in-mind person. The reading level is about sixth to eighth grade. A variety of uses of magnets are explained and simple, easy-to-follow illustrated experiments are detailed for the reader. The last chapter of the book reviews some of the more complicated, modern use of magnets such as in the medical Magnetic Resonance Imaging equipment. Included in the experiments that can be performed are the building of games and even an operating electric motor. If you or your child is interested in magnetism, this book is a good place to start.

THE REVOLUTION IS COMING

A book report by Hal Fox

Jeane Manning (freelance journalist), The Coming Energy Revolution, c1996, published by Avery Publishing Group,

Garden City Park, New York, 230 pages, illus., resource list, glossary, indexed, ISBN 0-89529-713-2.

This timely book is highly recommended for all readers, especially for the general reader. It provides both an excellent report on the historical background of the search for new energy and introduces the readers to those who are now involved in various aspects of new energy developments.

The book is divided into four parts: Part I - Past Revolutionaries; Part II - Space Energy and the New Physics; Part III - Emerging Energy Technologies; and Part IV - The Energy Revolution -- Potential Amid the Problems. In addition, the book begins with a favorable Foreword by Brian O'Leary, who is well known in the new-energy field.

Part I discusses some of the historic work of Nikola Tesla, John Ernst Worrell Keely, Walter Russell, Thomas Henry Moray, Lester Hendershot, Viktor Schauberger, and Wilhelm Reich.

Part II tells us about some of today's geniuses such as Moray King, Harold Puthoff, and Thomas Bearden and their efforts to help provide a scientific underpinning for "space energy." Next, the works of Kenneth Shoulders and his high-density charge clusters, Wingate Lambertson and his cermet devices, and John Hutchison and his new rock-crystal devices. These three innovators are apparently tapping space energy with three different solid-state devices. The work of the late Floyd "Sparky" Sweet is described. Four other persons who have worked with rotating machines in the production of energy are introduced: Bruce dePalma (now of New Zealand), Bertil Werjefelt (Hawaii), Shiuji Inomata (Japan), and Paramahansa Tewari (India). These are four of the leading lights in the development of the "N-Machine" which was instigated by Bruce dePalma.

Part III discusses the advent of cold nuclear fusion, first announced in 1989 by Professors Stanley Pons and Martin Fleischmann at a press conference called by the staff of the University of Utah. The author cites that the work not only is continuing but is being commercialized. The work of the late Francisco Pacheco in producing hydrogen gas from sea water and using this power for a variety of energy devices is presented. In a similar task to develop the power of hydrogen, Jeane Manning brings us up to date with the life's work of Roger Billings (formerly from Utah and now in Independence, Missouri).

Part III also includes the stories behind the work of Peter Lindemann and George Wiseman in using relatively low-grade heat as a useful power source. Their efforts to develop

Low-Temperature Phase Change (LTPC) technologies are discussed. Also, Jeane tells us the story of Harold Aspden (one of our active correspondents) and his search for better ways of using magnets and heat to produce useable energy. This part of the book includes a report on William Baumgartner who is improving on the work of the late Viktor Schauberger in the use of vortexing water. The trials and tribulations of the use of the new technology of low-flow water power, as developed by Martin Burger, is included in this part of Manning's book. Finally, the work of Johann Grander (another follower of Viktor Schauberger's work) and his discovery of "living water," the rotating energy-producing disks of Paul Baumann at the Methernitha commune, and the hydrosonic pump of James Griggs, are discussed. These are fascinating tales of the difficulties of getting (or not allowing) new-energy developments to get to the market place.

Part IV of this easy-to-read book consists of three chapters entitled, "Harassing the Energy Innovators," "Society and a New-Energy Economy," and "The Power is in our Hands." This finale of an excellent book discusses the problems, the solutions, the challenges, and the opportunities that we all face in the development, acceptance, marketing, and enjoyment of the new energy devices.

The reader of this book will find that we still have things to learn from early new-energy developers who devoted their lives to their work. Of great importance is the fact that there are a number of living researchers who are likely to become well known as the inventors and developers of viable new-energy technologies. In this reviewer's opinion, some of the products mentioned in the book will not become commercialized **because the technology is maturing so rapidly that a better product may be on the market before an existing product can be commercialized.** For example, it is this reviewer's judgement that the N-Machines will be replaced by such developments as the Takahashi super magnet, super motor. Some of the solid-state devices may never make it to market because there are newer and better devices that are emerging from laboratories. **The past, present, and future development of new-energy devices that will change the world from a fossil-fuel economy to a space-energy economy makes an exciting story.** All three classes of events are treated in this excellent book by Jeane Manning. We recommend this book to you.

In a personal note, as the author of Space Energy Impact in the 21st Century, I am indebted to Jeane **because this book of hers is an excellent introduction to my own forthcoming book** (scheduled for July, 1996). From the vantage point of being the editor of two newsletters and having the privilege of becoming personally acquainted with

some of the world's leading workers in the new-energy field, my book will reflect some of the latest materials that can be published about several new devices that are tapping space energy. Therefore, from a selfish point of view, thanks Jeane Manning for an excellent introduction to space energy!

REVIEW OF SIERRA CLUB BOOKS

By Hal Fox

The Sierra Club Books, 100 Bush Street, 13th Floor, San Francisco, CA 95104, kindly sent me a copy of their latest book catalog and a review copy of The Sierra Club Green Guide.

In their book catalog there were two energy-related books offered: The Home Energy Decision Book, by Gigi Coe, Michael Garland, & Michael Eaton, ISBN: 0-87156-816-X for \$9.95, and Creative Energy. Bearing Witness for the Earth, by Thomas Berry, ISBN 0-87156-622-2, a 96-page essay on the author's "abhorrence of self-serving, anthropocentric activity rooted in the narrow focus of religion and science."

When renewable, non-polluting energy is such an important part for the future of a clean, green world, the Sierra Book Clubs appear to have scant offerings. However, they did a better job in the book, The Sierra Club Green Guide. Everybody's Desk Reference to Environmental Information, by Andrew J. Feldman. The following is a review of the "Green Guide":

As promoted on the cover, the Green Guide provides information "featuring more than 1200 essential resources, including Internet Sites, Bulletin Board Systems, and Electronic Databases to help you answer any environmental question." The Chapters in this \$25, 304-page paperback (ISBN 087156-471-8) include the following in two parts: Part One - Environmental Issues, the first 188 pages include the following chapters: General, Agriculture, Air, Biodiversity, **Energy**, Environmental Justice, Health and Toxics, Sustainable Communities, Waste, and Water; Part Two - Green Living (pages 189 to 246) includes chapters on: Architecture, Education, Employment, Gardening, Grants, Investing, Shopping, and Travel. The book has three appendices (Federal Information Centers, Database Vendors, and Publishers (a ten-page list in three columns), and a good index (21 pages, 3 columns).

For those goals and objectives championed by the Sierra Club that include aiding the environment, the topic of most interest to our newsletter is **Energy**. The Sierra Club Green Guide provides a sixteen page chapter on **Energy**. The 23

listings range through Government Clearinghouses, Organizations, Internet Sites, Bulletin Boards, Directories, Bibliographies, Reference Handbooks, Introductory Reading, Abstracts and Indices, and Periodicals. Many of the citations are for alternative energy and nuclear power (both for and against). Solar, Wind, and Alternative Fuels are listed. **There are many excellent citations for these topics that are covered and the reader will find this energy guide useful in tracking down sources of information on standard and alternative energy.** However, after seven years of research and development of cold fusion, not one citation is listed in the index. Not one organization nor one publisher is listed that provides information on cold fusion, magnetic energy, free energy, or any of the more recent developments in tapping the energy of space.

These emerging technologies that are being commercialized in 1996 are nowhere mentioned in the **Sierra Club Green Guide**, which bears a 1996 copyright date. We believe that it will be environmental organizations who will be some of the major promoters of the coming energy revolution, **as soon as they find out that such a technological revolution is happening and that such new-energy technology will be dramatically important in cleaning up the environment.** We will be suggesting to Sierra Club Books that they include the following information in their next edition of The Sierra Club Green Guide:

Books: Fire From Ice, by Eugene Mallove, John Wiley & Sons, c1991, ISBN 0-471-53139-1.

Cold Fusion Impact in the Enhanced Energy Age, by Hal Fox, Fusion Information Center, c1992, ISBN 0-963-49780-4, with its over 2500 references on diskette.

Space Energy Impact in the 21st Century, by Hal Fox, Fusion Information Center, c1996, in press, with its over 3000 references on diskette.

The Coming Energy Revolution, by Jeane Manning, c1996, Avery Publishing Group.

Publications: *Infinite Energy* edited/published by Eugene Mallove; *Fusion Facts* a monthly newsletter edited by Hal Fox; *Cold Fusion Times* quarterly newsletter edited/published by Mitchell Swartz; "*Cold Fusion*" edited/published by Wayne Green; *New Energy News*, a monthly newsletter edited by Hal Fox; *Fusion Technology*, an international journal for the American Nuclear Society, edited by George Miley; *Planetary Association for Clear Energy Newsletter*, edited by Andrew Michrowski, Ontario, Canada; and the *Journal for New Energy*, published by Fusion Information Center.

Organizations: Institute for New Energy, P.O. Box 58639, Salt Lake City, Utah 84158; Academy for New Energy, 1304

S. College Ave., Fort Collins, Colorado 80524; Planetary Association for Clean Energy, 100 Bronson Ave, #1001, Ottawa, Ontario K1R 6G8, Canada.

Internet: Institute for New Energy Home Page: www.padrak.com/ine/ which contains many important scientific papers and current reports on all areas of new-energy research.

Those of you who are interested in finding more information about environmental and clean energy related topics are urged to obtain a copy of The Sierra Club Green Guide. However, suggest that they update their Energy chapter.

I. MEETINGS

ICCF6

Sixth International Conference on Cold Fusion

will be held 13-17 October 1996

Hotel Apex Toya, Hokkaido, Japan

Conference Secretariat:

Tel +81-3-3508-8901 Fax +81-3-3508-8902

E-mail mac@iae.or.jp

The conference will consist of both oral and poster sessions covering experimental work and theory on the following topics:

- Excess Energy Phenomena in D₂/Metal Systems
- Correlation Between Excess Energy and Nuclear Products
- Nuclear Physics Approaches
- Material Science Studies
- Innovative Approaches (Miscellaneous Phenomena)

Registration fee of ¥40,000 (about \$400) includes a banquet and proceedings. A technical tour to the NHE lab is scheduled on Oct. 18, along with other professional and social events.

Hotel: Deadline for guaranteed accommodation is August 1.

Contact: Hotel Apex Toya Hokkaido

Aza-Shimizu, Abuta-machi, Abuta-gun

Hokkaido 049-56, Japan.

Tel: +81-142-73-1111 Fax +81-142-73-1157

Registration: Final Deadline August 1. Send for application package to Conference Secretariat
c/o NHEI-Center, IAE

Shinbashi TS Building

1-22-5 Nishi-Shinbashi, Minato-ku

Tokyo 105, Japan

(tel. info above)

INTERNATIONAL SYMPOSIUM ON CONSCIOUSNESS, NEW MEDICINE AND NEW ENERGY

Yomiuri Hall, Tokyo, Japan

November 21-22, 1996

Dr. Shiuji Inomata is organizing a symposium to discuss and present research results in such broad topics as consciousness phenomena, holistic medicine, integration of Western and Eastern medicine, and new energy technology. The sponsor is the Japan Green Cross Society. Paramahansa Tewari has been chosen as the keynote speaker for the conference. Participation fee is US\$ 190.

Contact: Mr. Tetsu Nagano, Japan Green Cross Society

2F Kamon Building

2-7-14 Hamatsu-cho

Minato-ku Tokyo 105 JAPAN

Tel: +81(0)3-3437-2218

Fax: +81(0)3-3437-2808 or +81(0)3-3437-2624

Commercial Column

The following companies (listed alphabetically) are commercializing cold fusion or other enhanced energy devices:

COMPANY: PRODUCT

American Pure Fusion Engineering and Supply: Information and troubleshooting for the fusion research and development industry. Salem, Oregon. The president, Warren Cooley, can be reached at 1-800-789-7109 or 503-585-6746. Email to: Coolwar@aol.com

CETI (Clean Energy Technologies, Inc.): Developers of the Patterson Power Cell™. Dallas, Texas. Voice 214-982-8340, FAX 214-982-8349.

Clustron Sciences Corp.: New energy research consulting and information. Contact: Ron Brightsen, 703-476-8731.

ENECO: Portfolio of intellectual property including over thirty patents issued or pending in cold nuclear fusion and other enhanced energy devices. Salt Lake City, Utah. Contact Fred Jaeger, Voice 801-583-2000, Fax 801-583-6245.

E-Quest Sciences: Exploring The Micro-Fusion™ process. Seeking qualified research partners for their sonoluminescence program. Contact Russ George, FAX 415-851-8489.

Fusion Information Center (FIC): Research and development of new energy systems. The world's most complete resource depository for cold fusion research information, as well as other new energy research including zero-point energy; space energy research; electronic, electromagnetic, and mechanical over unity devices and more. We are the publishers for *Fusion Facts*, *New Energy News*, and *the Journal of New Energy*. Voice 801-583-6232, Fax 801-583-2963.

Holotec AG, Clean Energy Technology, contact André Waser, Gen. Mgr., Bireggstrasse 14, CH-6003, Luzern, Switzerland. Phone 011 41-41 360 4485, or Fax 011 41-41 360 4486.

Hydro Dynamics, Inc.: Hydrosonic Pump, heat-producing systems using electrical input with thermal efficiencies of 110 to 125 percent. Rome, Georgia. Contact James Griggs, Voice 706-234-4111 Fax 706-234-0702.

International Management Systems Co. (IMSC): Technical project/program management assistance, and technology development and commercialization assistance. Contact Mark Harris or Richard Youngs, Phone 801-583-6232, Fax 801-583-2963, or Phone/Fax 801-255-3000.

JET Energy Technology, Inc.: Design and manufacture of π -electrode systems, calorimeters, and associated equipment and systems. Consulting regarding radiation, materials, and other scientific and engineering issues. Weston, MA. Contact Dr. Mitchell Swartz, Voice 617-237-3625. Fax 617-237-3625.

Labofex, Experimental and Applied Plasma Physics: R&D of PAGD (Pulsed Abnormal Glow Discharge) plasma technology. Applications under development include portable power supplies, electric vehicles and autonomous housing. Licensing. Ontario, Canada. Contact Dr. Paulo N. Correa. Tel 905-660-1040 Fax 905-738-8427

Magnetic Power Inc.: The Joint Venture partner with Sciex (UK) for Takahashi supermagnets and supermotors in North America. Sebastopol, CA. Contact Mark Goldes, Voice 707-829-9391, Fax 707-829-1002.

Nova Resources Group, Inc.: Design and manufacture ETC (Electrolytic Thermal Cell); EG (commercial power cogeneration module); and IE (integrated electrolytic system). Denver, CO. Call Chip Ransford, Phone 303-433-5582.

UV Enhanced Ultrasound: Cold Fusion Principle being used for an ultrasonic water purifier. Hong Kong. FAX 852-2338-3057.

Zenergy Corporation: Founded in 1996 to facilitate the introduction of commercially viable energy alternatives. (formerly Power Cell Technologies) Chandler, AZ. Contact Reed Huish: 602-814-7865, Fax 602-814-7665, e-mail: reedh@indirect.com

Note: The Fusion Information Center has been acting as an information source to many of these companies. We expect to augment our international service to provide contacts, information, and business opportunities to companies considering an entry into the enhanced energy market.

INFORMATION SOURCES

Academy for New Energy (ANE) is a subsidiary organization to the International Association for New Science, which has specific goals directed toward the field of alternative and "New" energy research. 1304 S. College Ave., Fort Collins, CO 80524. Tel. 970-482-3731

ANE Newsletter, quarterly publication of ANE, providing an open forum for discussion, and disseminating newsworthy and inspirational information on invention and new energy. Edited by Robert Emmerich.

Advanced Energy Network Newsletter, quarterly, a reprint of articles and papers from other energy publications, with book reviews and worldwide conference list. Advanced Energy Network, P.O. Box 691, Rondebosch 7700 Capetown, Rep. South Africa.

"*Cold Fusion!*", monthly newsletter, edited by Wayne Green, 70 Route 202N, Petersborough, NH 03458.

Cold Fusion Times, quarterly newsletter published by Dr. Mitchell Swartz, P.O. Box 81135, Wellesley Hills MA 02181. Home Page: <http://world.std.com/~mica/cft.html>

Cycles, a R&D newsletter, published by Dieter Soegemeier, Editor, GPO Box 269, Brisbane, QLD.4001, Australia. Phone/Fax: +61 (0)7 3809 3257.

Electric Spacecraft Journal, quarterly, edited by Charles A. Yost, 73 Sunlight Drive, Leicester, NC 28748.

Fusion Facts, monthly newsletter. Salt Lake City, UT. 801-583-6232, also publishes Cold Fusion Impact and Cold Fusion Source Book. Plans on-line database access.

Fusion Technology, Journal of the American Nuclear Society, edited by Dr. George Miley, publishes some papers on cold nuclear fusion. 555 N. Kensington Ave., La Grange Park, IL 60525.

Infinite Energy, new bi-monthly newsletter edited by Dr. Eugene Mallove (author of Fire from Ice), P.O. Box 2816, Concord, NH 03302-2816. Voice: 603-228-4516. Fax: 603-224-5975 E-mail 76570.2270@compuserve.com

Institute for New Energy (INE), organization to promote and help find funding for new energy research.

Home Page: www.padrak.com/ine/ contains many important scientific papers and current reports on all areas of research.

E-mail: ine@padrak.com Salt Lake City, Utah. Voice 801-583-6232, Fax 801-583-2963.

New Energy News monthly newsletter for INE, highlighting the research and development in the worldwide new energy arena. Edited by Hal Fox.

Journal of New Energy, quarterly, presenting papers representing the new areas of energy research, leading-edge ideas in the development of new energy technology, and the theories behind them. Published by the Fusion Information Center, Inc., for the Institute for New Energy. Editor: Hal Fox.

KeelyNet BBS - Science and health oriented information exchange that specializes in nonstandard research, much of it on new energy. Jerry Decker, 214-324-3501 Internet: www.keelynet.com E-mail: jdecker@keelynet.com

Planetary Association for Clean Energy Newsletter, quarterly, edited by Dr. Andrew Michrowski. 100 Bronson Ave, # 1001, Ottawa, Ontario K1R 6G8, Canada.

Now available: Clean Energy Review, a technical and scientific discussion on nuclear fuel wastes disposal. Discusses transmutation as one possible solution. \$5 U.S. and Canadian, \$7.50 other countries.

Space Energy Journal, quarterly, edited by Jim Kettner & Don Kelly, P.O. Box 1136, Clearwater, FL 34617-1136.

21st Century Science & Technology, P.O. Box 16285, Washington, D.C., 20041. Includes cold fusion developments.

The above list of commercial and information sources will be growing. New listings will be added as information is received. Send information to Fusion Facts, P.O. Box 58639, Salt Lake City, UT, 84158.

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