

# CSICOP: "Science Cops" at War with Cold Fusion

by Eugene Mallove. Sc.D.

The collective wisdom of the so-called Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) is that cold fusion—and any other claim about an anomalous energy source not taught in the sacred halls of academe—is scientific heresy worthy of mockery and rebuke. That is the message, by commission and omission, that is conveyed in CSICOP's ritualistic debunking of cold fusion and related low-energy transmutation discoveries. (CSICOP has disdain for any other novel energy claims that may result, for example, from Zero Point Energy (ZPE) tapping, but the organization does not spend much time on these pejoratively labeled "perpetual motion machines.") Since the cold fusion announcement in 1989, CSICOP's main thrust in denying new energy sources has been to attack cold fusion research. The abuse occurs in the organization's magazine and in public pronouncements by *some* of CSICOP's dozens of illustrious Fellows. The Fellows include five Nobel laureates, biologist-author Steven Jay Gould, the late Carl Sagan, and Steve Allen, who is listed as a "comedian, author, composer, pianist." Only a small number of the Fellows are known to have attacked cold fusion. Carl Sagan, to his credit, was relatively open-minded and polite compared to others at CSICOP (see *Infinite Energy*, issue No. 20).

CSICOP, founded in 1976, is a non-profit organization of several tens of thousands of individuals. It publishes the magazine *Skeptical Inquirer: The Magazine for Science and Reason*. This glossy, well-financed journal is now a bi-monthly publication; before 1995 it was quarterly. Its current subscriber list is said by CSICOP to be about 50,000 in 80 countries, and it is on newsstands. It is undoubtedly very influential with the general media.

The current financial appeal by CSICOP to raise \$10 million for its "Fund for the Future" states that CSICOP "... is universally acknowledged as the media's foremost source of objective, scientific expertise on paranormal matters. More than 35 autonomous local groups amplify the skeptical message across the U.S., along with more than 40 autonomous national skeptic groups abroad, publishing some 19 magazines and journals in nine languages."

CSICOP's world headquarters is in Amherst, New York where it has a facility dubbed "Center for Inquiry-International." CSICOP is affiliated with the Council for Secular Humanism, publisher of *Free Inquiry* maga-

zine—a journal that specializes in criticizing religions (organized and otherwise) and mystical beliefs in general—what CSICOP founder Paul Kurtz calls "the transcendental temptation." The Center for Inquiry "Fund for the Future" is a joint venture by CSICOP and Council for Secular Humanism to raise \$20 million in endowment funds—\$10 million of that intended for CSICOP.

CSICOP's purpose is succinctly stated on *Skeptical Inquirer's* cover: "The Committee for the Scientific Investigation of Claims of the Paranormal encourages the critical investigation of paranormal and fringe-science claims from a responsible, scientific point of view and disseminates factual information about the results of such inquiries to the scientific community, the media, and the public. It also promotes science and scientific inquiry, critical thinking, science education, and the use of reason in examining important issues. To carry out these objectives the Committee: sponsors

publications; conducts public outreach efforts; maintains an international network of people and groups interested in critically examining paranormal, fringe science, and other claims, and in contributing to consumer education; encourages research by objective and impartial inquiry in areas where it is needed; convenes conferences and meetings; conducts educational programs at all age levels; does not reject claims on *a priori* grounds, antecedent to inquiry, but examines them objectively and carefully."

All this sounds very high-minded and fair, a policy with which any good scientist might agree. That is, if CSICOP and its journal were really faithful to these governing principles. Unfortunately, virtually from the outset in 1976, CSICOP became a politicized debunking organization. Its tiresome agenda is to assault, often with a barrage of often bogus or flawed "studies" and mockery, any and all scientific heresies that do not adhere to currently accepted theories of physics, chemistry, and medicine.

Of all the claimed non-scientific heresies that CSICOP rails against, several occupy most of the *Skeptical Inquirer's* fire-power. Its favorite whipping boys are: alternative medicine; UFO sightings and alien abduction claims; all paranormal claims involving extrasensory perception and psychokinesis; astrology; "creation science" and, for



On the cover of the *Skeptical Inquirer*, Vol. Xii, No. 4 (this page): From left to right, Kendrick Frazier, Philip J. Klass, Wu Xiaoping, James Alcock, James Randi, Barry Karr, and Paul Kurtz.

good measure, the activities of any and all religious or spiritual groups—especially those outside “mainstream” organized religion.

In the early 1980s, when out of curiosity I began subscribing to *The Skeptical Inquirer*, I was inclined to take at face value some of the magazine’s articles on investigations of paranormal claims and “fringe science” claims. Some of these “investigations” I already recognized were obvious hatchet jobs by individuals bent on dismissing *all* evidence based on “this cannot be” paradigms, rather than on objective examination of evidence. For example, the cavalier, arrogant rejection by Philip J. Klass of the *entire* body of UFO evidence.

Later, when the cold fusion crisis emerged in 1989 and I witnessed first hand at MIT the bigotry and anti-scientific hysteria of the opponents of cold fusion investigation, I was taken aback by wanton disregard of the then growing body of experimental evidence supporting the emerging phenomenon. Even though the microphysical explanation then (and now) is a matter of disagreement among cold fusion scientists, the evidence for nuclear-scale excess energy production and various forms of nuclear ash is now very well established in a variety of hydrogen-metal systems. This has been true at least since 1991. But displaying its true colors, CSICOP early on joined the chorus of knee-jerk cold fusion critics.

I still examine each article in *SI* on a case-by-case basis. But overall my view is that CSICOP, as an organization, could do much to increase its intellectual credibility. In effect, CSICOP appears to be an organized religion for the paradigm-paralyzed. These are philosophers, journalists, and so-called scientists who are so convinced of the solidity of currently accepted paradigms in physics, that they truly cannot tolerate the idea that radical modifications to physical theory might be necessary to account for new experimental findings. CSICOP is theory-driven, not experiment driven—its protests for being so-characterized notwithstanding.

It might be considered natural for the “science cops” of CSICOP to feel comfortable debunking the statistical results of parapsychology experiments or mocking unusual religious viewpoints. But it boggles the mind that CSICOP would have the audacity to conduct warfare against a hard physical science area—cold fusion—for which there currently exist numerous scientific papers in the peer-reviewed and non-peer-reviewed literature.

It is remarkable and revealing that CSICOP uses the

term “fringe science” at all in its statement of purpose. Any good student of the history of science must realize that virtually all major scientific discoveries were initially “fringe science.” Anomalies and radical scientific ideas that have turned out to be valid, have routinely been ridiculed before their acceptance by established science. I presume CSICOP considers cold fusion to be “fringe science.”

For the purposes of this column, let us set aside CSICOP’s dismissive treatment of alternative medicine, UFO claims, ESP, and the like, and focus on an area with which we at *Infinite Energy* claim considerable expertise—cold fusion. Perhaps by seeing how improperly CSICOP treats this area, one might be concerned that the organization’s handling of other heretical topics could be similarly distorted.

The claim by CSICOP that it “does not reject claims on *a priori* grounds, antecedent to inquiry, but examines them objectively and carefully,” is in my

opinion a intellectual fraud in the case of its editorial stance on cold fusion. If CSICOP’s claim of “objective examination” were true concerning cold fusion, one would have expected its members to delve deeply into the scientific papers on cold fusion published in peer-reviewed and non-peer-reviewed journals. We would have expected them to discuss what fundamental errors they have found in these scientific papers. Instead, we find essentially no such discussions within CSICOP’s journal except for highly flawed discussions of the early history of the field—as though the science stopped in 1989 with the U.S. Department of Energy’s negative report.

In the case of cold fusion and related energy and transmutation claims, it is absolutely clear that CSICOP’s lack of scientific investigation constitutes intellectual fraud. CSICOP members who do not consider themselves mere propagandists against cold fusion, as some of CSICOP’s better known members have demonstrably been, should have second thoughts about CSICOP’s editorial position.

In the very latest issue of *Skeptical Inquirer* (January/February 1999, Vol. 23, No. 1), we find a typical unsupported attack against cold fusion. It is buried in a lengthy statement about “Science and Pseudoscience” by a leading Russian organizer, physicist Sergei Kapitza (Vice President of the Russian Academy of Natural Science). *Skeptical Inquirer’s* editor, journalist Kendrick Frazier, wrote—or let pass—this introduction to Kapitza’s statement: “With the collapse of the Soviet Union and subsequent profound economic crisis, science in Russia is in a difficult state. The rampant social disruption has been accompanied by a veritable flood of pseudoscience.

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The rise of irrationality and decline of reason may also be part of a wider global trend."

In Kapitza's statement that follows we find this paragraph:

"Pseudoscience is even observable in high levels of the academic establishment. A well-known mathematician is publicizing for a new chronology of world history where there is no place for the Middle Ages and a thousand years of history are thrown out. . . these works are published and discussed in mass media. *Work on cold fusion and other marginal effects are supported and publicized, for the level of expertise and often the great persuasive power of these pseudoscientists leads to the support of their ideas.* [Editor's Note: Our *Italics.*] Where then are the limits of public debate and of professional honesty? Or is this all a transient phenomenon? Out of chaos will a new order finally come? These are not easy issues to resolve. Time and again the public is persuaded, if not fooled, on important matters of professional interest, often amplified by the media."

Kapitza is listed on the roster of CSICOP Fellows and for ten years he was "in charge of the Russian edition of *Scientific American*."

So, Kapitza says that cold fusion is "pseudoscience" and he alludes to "limits of public debate." Does he, like his CSICOP brethren outside Russia, want "pseudoscience" like cold fusion expunged from public discussion? Apparently. I would ask Kapitza: Where are *your* limits of "professional honesty"? Do you have any? Have you read the cold fusion literature published by your scientific colleagues in Russia, or is it just your habit to fling bigoted words toward experimental results that you have not examined? Have you attended international cold fusion conferences? Have you attended the cold fusion conferences in Belarus? We know you haven't, so why not just hold your peace on this matter—refrain from claiming to be knowledgeable on the important scientific issue of cold fusion.

Lack of intellectual curiosity (or is it lack of integrity?) is common among the leadership of CSICOP in the matter of cold fusion. On the morning of July 14, 1998, I called *Skeptical Inquirer's* editor, Kendrick Frazier, to ask him, among other things, what research or literature search he had done on cold fusion. He rebuffed me, saying that he was too busy to talk, because he was on deadline on an editorial project. We spoke briefly; he was transparently irritated. He said, "I know who you are." He said that he did not want to talk with me because, "We would have diametrically opposed views." I said, "Oh, what research have you done to come to your conclusions about cold fusion." I had thought that the careful investigation of "diametrically opposed views" was part of the work of CSICOP. Perhaps I was mistaken. Frazier said, "I am

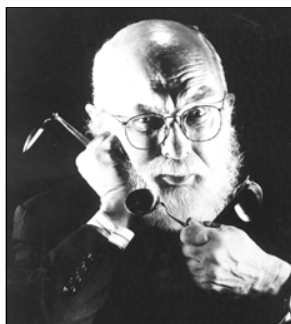
not an investigator, I am an editor." The conversation ended with Frazier stating that he had nothing further to say. I would have thought that CSICOP's journal editor should have been delighted to have a conversation with the "other side." He could then cite his exchange as part of CSICOP's "research by objective and impartial inquiry in areas where it is needed."

I note that we have extended to CSICOP a continuing complimentary subscription to *Infinite Energy*—as we often do to other influential national media. CSICOP's library has been receiving *IE* almost since our magazine's inception. Now in 1998 I have extended to editor Frazier himself a complimentary subscription—directly to his New Mexico address. Prior to my phone conversation with Frazier, I had told the person who answered the phone that Frazier should contact cold fusion scientists in New Mexico—Dr. Edmund Storms, formerly of Los Alamos National Laboratory (LANL); Dr. Tom Clayton, still at LANL; and Dr. Dennis Cravens. She took down their names. None of these people were contacted by Frazier—not that I am surprised. This is part of the intellectual bankruptcy of CSICOP, its Fellows, and its science journalist editor.

In *SI's* July/August 1998 issue (Vol. 22, No. 4), Frazier highlights two items from Robert Park's American Physical Society "What's New" electronic newsletter. The banner headline of the piece (signed by Frazier) is "APS Worries about Nonsense in Name of Science—Cold Fusion Transforms Again." Park's April 17 barb against cold fusion follows his note about the "alarming spread of nonsense calling itself science." Park: "Cold Fusion-7: Vancouver meeting reports more than heat—The preferred term among believers is now 'chemically assisted nuclear reactions.' Nowadays it seems to transmute gold into base metals, neutralizes radioactivity, and works fine with ordinary water. We note that the probability of N miracles is equal to the probability of one miracle to the Nth power." If *SI* readers imagine they are getting the straight story about cold fusion from thoughtless assaults such as Park's, they are mistaken.

To review some of the attacks on cold fusion by other high-profile CSICOPers:

From magician James Randi, a long-time CSICOP member and founder: "The 'cold fusion' farce should have been tossed into the trash heap long ago, but justifiable fear of legal actions by offended supporters has stifled opponents. . . cold fusion is a dead duck, the earth is not flat, and the fault lies not in our stars, but in ourselves." (From *American Physical Society News*, June 1994). Leap to *SI* July/August 1998 (Vol. 22, No. 4) and we find a report on Randi's latest "Pegasus Awards," one to ABC-TV News "for their unquestioning and enthusiastic endorsement of 'cold fusion,' ESP. . . [etc.] and all sorts of junk science. . . [blah, blah, blah]." We profiled Randi's nonsense in "Words to Eat" (*IE* No. 20).



James Randi.  
Photo: ©Enrico Ferorelli.



Nobel Laureate Leon Lederman, another Fellow of CSICOP: "If those university of Utah chemists who thought they had discovered cold fusion had understood Faraday's law of electrolysis better, perhaps they would never have embarrassed themselves as well as the rest of us." (In *The God Particle*, by Lederman and Teresi, 1993), See *Words to Eat* IE No. 21.

CSICOP Fellow, Nobel Laureate Glenn Seaborg played a major role in getting the U.S. DoE and the scientific community at large off on the wrong foot in 1989. By his own admission, on April 14, 1989 (Only three weeks after the Utah announcement!), Seaborg told President Bush in the Oval Office of the White House, "... it is not due to nuclear fusion, but on the other hand it must be investigated." Thus was launched the sham investigation by the DoE, leading to its rush-to-judgement negative report only several months later. CSICOP editor Frazier is apparently so enthralled by his Nobel Laureate Fellows that he had no problem with this Seaborg statement—on its face a bald-faced admission of "rejecting claims on a *priori* grounds, antecedent to inquiry," contravening the supposed principles of CSICOP. These words appeared in *Skeptical Inquirer's* November/December 1997 (Vol. 21, No. 6) interview profile of Seaborg, "The Elemental Man." (See IE No. 15/16, p. 3, pp. 66-67).

Another CSICOP Fellow, John Maddox, editor emeritus of *Nature* magazine, played a major role in unleashing anti-scientific bigotry against cold fusion. He wrote slanderous editorials. Violating all the canons of scientific ethics, while Maddox was editor *Nature* refused to publish scientific correspondence from several Ph.D. electrochemists that criticized precise mathematical and procedural points in the allegedly null-results in Caltech's cold fusion calorimetry, which had been published in *Nature*. (The devastating correspondence was subsequently published in several other peer-reviewed journals, thus circumventing *Nature's* unethical suppression of scientific discourse about its own publication.) This was not surprising with Maddox at the helm. Early on Maddox had written: "It seems the time has come to dismiss cold fusion as an illusion of the past four months or so." (July 6, 1989, *Nature*). "I think that, broadly speaking, it's dead, and will remain dead for a long, long time." (1991, in the NOVA television program "Confusion in a Jar." See IE No. 18, "Words to Eat.")

CSICOP Fellow, Nobel Laureate Murray Gell-Mann,

had this to say at a public forum (lecture at Portland State University, as reported in IE No. 19, p. 47). in 1998: "It's a bunch of baloney. Cold fusion is theoretically impossible, and there are no experimental findings that indicate it exists."

Though CSICOP's Fellows are among the leading people who trash cold fusion research, it is interesting that cold fusion has not so regularly come under fire in the *Skeptical Inquirer's* pages—certainly not in the manner that other heresies come in for ritual brutality. Perhaps there is a conscious or subconscious awareness that CSICOP figureheads are in no position to adequately judge cold fusion? But I fear that gives them too much credit! CSICOP members could not possibly be unaware that many scientists continue to perform cold fusion research, participate in international meetings, and even engage in commercial activities involving cold fusion energy and low-energy transmutation. The glib CSICOP explanation for these continued studies and activities is, of course, "pathological science."

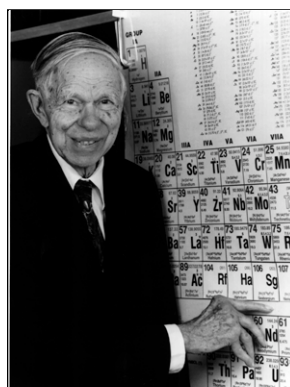
Still, whenever there is a tid-bit of ironic cold fusion bashing to purvey, *Skeptical Inquirer* obliges. A sampling:

In *SI* May/June 1998 (Vol. 22, No. 3) Kendrick Frazier, ignorant of the quality and magnitude of the scientific effort in cold fusion physics, and unwilling even to contact cold fusion scientists who live near him, makes hay over the University of Utah's abandonment of its cold fusion patent application. He does not tell his audience, of course, of the reason for this Utah action: the U.S. Patent Office's killing of the Pons-Fleischmann patent on spurious grounds—a matter that we have discussed extensively in *Infinite Energy* (see in particular IE No. 11). Frazier's signed *News and Comment* is bannered, "Cold Fusion Saga Ends at Its University of Utah Birthplace." Frazier is in no position to discuss the *end* of anything in cold fusion, but of course his propaganda no doubt delights CSICOP "true believer" skeptics. He labels cold fusion scientists "remaining die-hard devotees." He cites the 1989 DoE report like a mantra and says, "With only a few exceptions, the results [of initial cold fusion attempts at confirmation] were negative. The claims did not stand up."

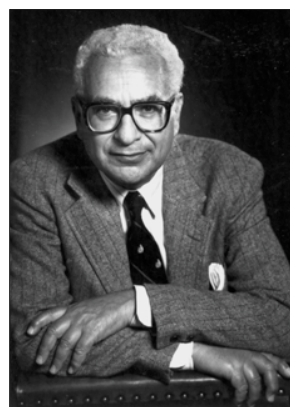
In *SI* January/February 1998 (Vol. 22, No. 1), we have science writer Robert Scheaffer, whose "beat" is usually UFO debunking, mocking one of the world's greatest electrochemists: "Another advance in science receiving belated recognition involves Professor John Bockris of Texas A&M University, who was recently awarded the



Physics Nobel Laureate Leon Lederman. Photo: Courtesy, Fermilab Visual Media Services.



Nobel Laureate Glenn T. Seaborg. Photo: Courtesy Lawrence Berkeley Laboratory



Nobel Laureate Murray Gell-Mann Photo: Courtesy Karsh/Caltech

celebrated Ig Nobel Prize for Physics by the *Annals of Improbable Research* at Harvard. Bockris is a leading researcher in the field of cold fusion, whose accomplishments have been prominently featured in *Infinite Energy* magazine. However, the prize was actually awarded for his experiments demonstrating the chemical transmutation of base metals to gold. Bockris did not travel to Cambridge to pick up his prize."

In *SI* May/June 1997 (Vol. 21, No. 3), New Mexico colleague of *SI* editor Frazier, John Geohegan, president of the CSICOP affiliate, New Mexicans for Science and Reason, praises the John Stossel program on ABC Television ("Junk Science," January 9, 1997). He begins with, "What a pleasure it is to see responsible treatment of science and pseudoscience on network television." He praised Stossel's treatment of cold fusion: "Next came an analysis of incentives for scientists to jump to the wrong conclusions: greed; powerful empires wishing to control science; fame and glory, as in the case of cold fusion. . ." Gee, "powerful empires wishing to control science"? For a moment I thought Schaeffer was talking

about the hot fusion program, whose members at MIT and Princeton played such key roles in assaulting cold fusion! Stossel's journalistic travesty, by the way, was dissected in *Infinite Energy*, No. 20.)

Ironically, Kendrick Frazier began *Skeptical Inquirer's* coverage of cold fusion in the Summer 1989 (Vol. 13, No. 4) issue with a relatively balanced appraisal, in part: "The case, it seemed, could turn out to be an epochal scientific achievement of overarching importance, or it could turn out to be an artifact, a mistake, or a delusion. Or perhaps it could be something in between, some previously unknown reaction that is new and important, but less significant scientifically and practically than originally claimed." Frazier signed off that article on May 2, 1989—the day after MIT Plasma Fusion Center's planted a story in the *Boston Herald* alleging that cold fusion was "scientific shlock" and "maybe fraud."

Frazier was even then beginning to buy onto the emerging propaganda line against cold fusion by MIT hot fusioners and their Caltech colleagues: "By early May, with several major research institutions reporting negative results in their own experiments and serious flaws in the Utah ones, the balance seemed to tip strongly against the Utah results." It was downhill from there with Frazier at the wheel.

Editor Frazier had not a word about cold fusion in the next issue Fall 1989 (Vol. 14, No. 1)—nothing, in fact until the Winter 1990 issue (Vol. 14, No. 2), therefore a significant gap in coverage in the crucial first phase of the cold

fusion controversy. In this Winter 1990 issue we find Milton Rothman's "Cold Fusion: A Case History in 'Wishful Science'?" He concluded: ". . . overenthusiasm and apparent greed and hubris changed a minor event into a major embarrassment for all of science. The manner in which scientists are perceived by the public has been diminished by this affair."

In the Fall 1990 issue (Vol. 15, No.1), Frazier noted that Gary Taubes had an article in *Science* magazine (June 15, 1990) in which, Frazier said: "[It] openly discusses for the first time questions that have been raised about the possibility that the tritium [in Texas A&M University cold fusion experiments] may have resulted from, if not inadvertent contamination, 'something more insidious.' Reports that researchers both at A&M and elsewhere

have asked that questions about 'possible fraud' be resolved." Quoting Taubes approvingly, he wrote that the episode. . . "has become a case study in the damage done when questions of fraud, legitimately raised, are not seriously addressed by either the lab chief or his institution." Just to be sure everyone got the

point, Frazier cited the Taubes article *again* in the Winter 1991 issue (Vol. 15, No. 2), and for good measure cited the negative conclusions of the U.S. DoE cold fusion final report.

Frazier, in all the tawdry pages of CSICOP's subsequent cold fusion coverage has never told his readers that the "fraud" allegation by character-assassinating journalist Taubes was officially found to be false. It was disproved by real scientists. Frazier has never informed his readers that there were subsequent publications by others in peer-reviewed journals, compellingly proving the production of tritium in cold fusion experiments. Yes, nothing excites CSICOP people more than the word "fraud" for claimed phenomena that don't fit their paradigms.

By the spring of 1991 (Vol. 15, No. 3), Frazier had "gone all the way." He quotes approvingly an article by journalist Bill Broad of the *New York Times* (October 30, 1990), "Cold fusion Still Escapes Usual Checks in Science": "Excellent report on the cold fusion debacle, focusing on why the conventional checking mechanisms of science apparently failed to resolve the issue decisively enough and how the process of science 'can be subverted by dedicated mavericks who defy the canon's of science.'"

This is by no means an exhaustive listing of all the ignorant insults flung at cold fusion research in the pages of *Skeptical Inquirer*, but I should mention that my book *Fire from Ice: Searching for the Truth Behind the Cold Fusion Furor* (Wiley, 1991) was, as expected,

*Unfortunately, as these true believer skeptics are being corrected, their mouths and fingers operate open-loop, powered by brains apparently devoid of scientific curiosity.*

unfavorably reviewed. NASA physicist Steven N. Shore published his review in the *SI* spring 1992 issue. (Frank Close's *Too Hot to Handle*, 1991 had been favorably reviewed two issues earlier.) Shore's review appeared under the line: "Seeking 'Resurrection' for Cold Fusion." He concluded: "If you want to see the other side of this issue, and to have a very clear look at the way that science can be distorted in its presentation, then Mallove's book is essential reading."

If it is an honor to be attacked by science bigots such as Shore who never took the time to study the archival papers or attend scientific meetings on cold fusion, I am honored. On the other hand, I prefer what Nobel Laureate Julian Schwinger (who was maligned for his cold fusion theorizing) had to

say about *Fire from Ice* on the book's jacket: "Eugene Mallove has produced a sorely needed, accessible overview of the cold fusion muddle. By sweeping away stubbornly held preconceptions, he bares the truth implicit in a provocative variety of experiments."

Frazier promoted John Huizenga's book *Cold Fusion: The Scientific Fiasco of the Century* (University of Rochester Press, 1992), quoting favorably Huizenga's bottom line: "The cold fusion fiasco illustrates once again, as N-rays and polywater have done earlier, that the scientific process works by exposing and correcting its own errors."

Yes, indeed, Frazier *et al.* are being corrected even as we speak, in laboratories worldwide. Unfortunately, as these true believer skeptics are being corrected, their mouths and fingers operate open-loop, powered by brains apparently devoid of scientific curiosity. In the matter of cold fusion, the twitching corpse of skepticism run amok—the egregious malfeasance of *Skeptical Inquirer* and CSICOP—is all too evident.

Kendrick Frazier's subsequent and continuing intellectual fraud in *Skeptical Inquirer's* coverage of cold fusion is commensurate with the smear of outstanding scientists such as Prof. John Bockris by journalist Gary Taubes. For some time we expect it will continue to be "case closed" on cold fusion for the pontificating, fact-avoiding science cops at CSICOP. In the pages of *SI* more knives will no doubt come out, wielded by the professional debunkers of cold fusion. These are the pathological skeptics, who solemnly intone about "pathological science," "wishful thinking," and "fraud." In due course, these hypocrites at CSICOP and their allies will receive long-overdue recognition as betrayers of the truth. Science will correct them.



## Jed Rothwell's Letter to a CSICOP Affiliate Publication

To: The Editors

December 23, 1998

*Skeptic* Magazine, P.O. Box 338, Altadena, CA 91001

Dear Sirs:

Your latest issue (Vol. 6, No. 3) included articles criticizing cold fusion by Park (p. 16) and Gorman (p. 65). Both claimed that the effect was not reproduced. This is incorrect. Excess heat and tritium from cold fusion have been widely reproduced at many world-class laboratories, including several U.S. National Laboratories, the French Atomic Energy Commission, Mitsubishi and so on. Many scientific papers describing this work have been published in peer-reviewed journals. Park and Gorman may claim that all of these papers are incorrect, but they cannot claim the papers do not exist.

*In due course, these hypocrites at CSICOP and their allies will receive long-overdue recognition as betrayers of the truth. Science will correct them.*

If Park and Gorman believe that all of these papers are incorrect, they should base their arguments on a detailed examination of the experimental data. Blanket statements that cold fusion is "junk science" have no meaning, and admit no response by the authors. How can anyone respond to such vague statements? If Gorman thinks this research is not up to snuff, he should list specific reasons why. He might explain, for example, why helium is confused with deuterium at the University of Texas and Rockwell International, or why the three methods for detecting tritium employed at Los Alamos failed simultaneously in experiment after experiment over the last eight years. I have read hundreds of papers about cold fusion. I have a bibliography listing more than 1,200 papers. As far as I know, neither Park nor Gorman has published a paper or technical critique, so I doubt they have any basis for their claims.


Cold fusion is an experimental observation, not a theory. It is valid because it has been widely replicated at high signal to noise ratios. You cannot disprove experimental evidence by pointing to a theory or an equation. Instead, you must slog through hundreds of papers and find specific errors or artifacts in every one of them. Some of these papers are strongly positive—irrefutably positive, in my opinion. Some are negative. Many are muddled or inconclusive, because cold fusion is difficult to replicate. The best laboratories, like Mitsubishi, reported that seven out of seven experiments over the past two years produced excess heat and gamma rays. In other successful laboratories about half of the cathodes produce excess heat and nuclear ash. However, most labs only see heat in perhaps one in ten experiments, mainly because of problems with cathode materials: the metal does not absorb deuterium, or it absorbs but expands, warps and fractures. This kind of difficulty replicating an effect is not unusual in solid state and catalysis applications. In the 1950s, many transistor production runs failed, or produced only one or two working devices per hundred. That is why transistors remained more expensive than vacuum tubes for several years.

I encourage you to acquaint yourselves with some of the technical literature in this field. I presume you do not have time

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we obtain for the increase

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I shall not occupy the time of the Society by a discussion of the different values of the increase corresponding to different values of  $c$ . I shall only remark that if  $c \sqrt{e}$  be less than  $\pi$ , the arc of vibration increases continually. Nor shall I consider the cases in which  $c$  is supposed to be a function of the position or velocity of the vibrating body (which possibly might better represent the circumstances that originally suggested this investigation). My object is gained if I have called the attention of the Society to a law hitherto (I believe) unnoticed, but not unfruitful in practical applications. 

**CSCICOP continued from page 59**

to review hundreds of papers, so I recommend you read a small selection of three representative papers:

M. McKubre *et al.*, "Isothermal Flow Calorimetric Investigations of the D/Pd and H/Pd Systems," *J. Electroanal. Chem.* 368 (1994) 55, enclosed. (You could read the full EPRI report instead, Development of Advanced Concepts for Nuclear Processes in Deuterated Metals, EPRI TR-104195, but it is 342 pages. I enclose the Summary and Abstract.)

M. Miles *et al.*, "Anomalous Effects in Deuterated Systems," NAWCWPNS TP 8302, September 1996, Naval Air Warfare Center Weapons Division, China Lake, CA 93555-6100, 96 pages. This was reprinted in our magazine. I would be happy to send you a copy.

T. N. Claytor, D. D. Jackson and D. G. Tuggle, "Tritium Production from a Low Voltage Deuterium Discharge on Palladium and Other Metals," Los Alamos National Laboratory. You can read this on the Internet: <http://www.nde.esa.lanl.gov/cf/tritweb.htm>

I would be happy to write a short article for your magazine about this subject.

Sincerely, Jed Rothwell

**Editor's Note:** Those open-minded CSCICOP followers who would like to learn more about the history of cold fusion science, from the perspective of those who have come to accept the experimental evidence for the phenomenon, are urged to examine the reports mentioned by Jed Rothwell. They might also wish to read:

- *Fire from Ice: Searching for the Truth Behind the Cold Fusion Furor* by Eugene F. Mallove, Sc.D., John Wiley & Sons, 1991 (available from *Infinite Energy* magazine)
- *Nuclear Transmutation: The Reality of Cold Fusion* by Dr. Tadahiko Mizuno, *Infinite Energy* Press, 1998, translated from the Japanese by Jed Rothwell, available from *Infinite Energy* magazine.
- Seminal references on cold fusion listed on the *Infinite Energy* magazine web site, <http://www.infinite-energy.com> 