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## *The Cold Fusion Phoenix*

"Warming Up to Cold Fusion" by Edmund Storms, in *Technology Review* (May-June 1994), P.O. Box 489, Mount Morris, Ill. 61054.

Five years ago, chemists Stanley Pons and Martin Fleischmann announced to a startled world that they had achieved a miracle of physics. In a simple table-top nuclear device operated at room temperature, they claimed, they had generated more energy than they had used. As excited media reports around the world noted, cold nuclear fusion held the promise of producing virtually limitless energy. When dozens of labs tried without success to duplicate the two chemists' astonishing experiment, however, scientists and the general public quickly turned skeptical. "Cold fusion" was widely dismissed as a delusion, and perhaps even a fraud.

Storms, a chemist recently retired from the Los Alamos National Laboratory, contends that the conventional wisdom about cold fusion is wrong. The early attempts to reproduce the experiment were marred by imperfect conditions, materials, or equipment, and by misinterpretations. Enough reputable researchers since then have published findings, resulting from a sufficiently broad range of experimental approaches, Storms says, to make it hard to doubt "that something is going on outside the explanations offered by conventional physics."

In Pons and Fleischmann's experiment, which was carried out at the University of Utah, electricity was applied to a strip of palladium surrounded by a coil of platinum wire and immersed in a container of "heavy water" (i.e. water in which deuterium takes the place of ordinary hydrogen). As the deuterium builds up in the palladium, "it supposedly undergoes the fusion reaction" and the metal heats up. Not only Pons and Fleischmann, working in France with support from a Japanese firm, but other reputable scientists have since reported producing heat in excess of the electrical input. "Dozens of examples reporting such excess energy have now been published," Storms says. In some cases, the excess energy has been "thousands of times larger than any known chemical (that is, non-nuclear) reaction could produce."

The excess heat generated is not the only evi-

dence for cold fusion, Storms observes. Many experiments have also produced tritium and helium, both elements "known to be produced only by nuclear reactions."

Although the experimental results conflict with accepted theory, Storms says, they "strongly support the conclusion that a new class of phenomena, which I call chemically assisted nuclear reactions, has been discovered." The discovery's ultimate practical worth remains to be seen. But he urges scientists to keep their minds open.

## *Medical Sexism?*

"The Sex-Bias Myth in Medicine" by Andrew G. Kadar, M.D., in *The Atlantic Monthly* (Aug. 1994), 745 Boylston St., Boston, Mass. 02116.

When it comes to health care, women have been treated as second-class citizens. So President Bill Clinton has asserted and women's-health advocates have insisted. Kadar, an anesthesiologist at the University of California at Los Angeles School of Medicine, agrees that there is a "medical gender gap," but, he contends, it favors women, not men.

American women, U.S. Department of Health and Human Services surveys show, seek and receive more medical care than men do (even if pregnancy-related care is excluded), and they spend two out of every three health-care dollars. That's not all. Kadar rebuts several oft-made claims:

- *A study conducted at the University of California at San Diego in 1979 found that men's complaints of back and chest pain, dizziness, fatigue, and headache more often resulted in extensive diagnostic workups than did similar complaints from women. The study is constantly cited as proof that "sex-biased" doctors take women's complaints less seriously than men's.* Not quite, says Kadar. That small-scale regional survey used the charts of only 104 men and women (52 married couples). It prompted a far more extensive national review of 46,868 office visits. The results, reported in 1981 but generally overlooked today, showed that the care received by men and women was similar about two-thirds of the time. "When the care was different, women overall received more diagnostic tests and treatment—more lab tests, blood-pressure checks, drug prescriptions, and return appointments," Kadar says.