

BREAKING THROUGH



ICCF10: A Message from the Front

by Eugene F. Mallove, Sc.D.

As we send this issue of *Infinite Energy* to our printing company in Manchester, New Hampshire in early September, we have just returned from the exhilarating Tenth International Conference on Cold Fusion (ICCF10) in Cambridge, Massachusetts—very near and also *at* MIT. Yes, there was an historic set of excess heat-producing cold fusion demonstrations at Prof. Peter L. Hagelstein's offices at MIT in the Department of Electrical Engineering and Computer Science! There is a staggering amount of news about cold fusion and low-energy nuclear reactions (LENR) to report from the conference—a lot to digest even for a veteran attendee of ICCFs. Time and space do not allow a lengthy report in this *Infinite Energy*, but it is likely that by the time you receive this issue I will have posted a special review of ICCF10 on our website (www.infinite-energy.com). Of course, there will be a full report in the next issue of the magazine (out in November), and readers should also consult the material being posted on www.lenr-canr.org. *Infinite Energy's* non-profit New Energy Foundation, Inc. plans to offer soon one or more DVDs that will highlight important conference lectures—and possibly a set of DVDs covering the entire conference.

For now and to whet your appetite for more information, here are some of the high points to be taken from ICCF10:

- During ICCF10, Dr. Mitchell Swartz's Fleischmann/Pons-type electrolytic palladium Phusor/low electrolyte conductance heavy water/palladium cell performed flawlessly in Prof. Hagelstein's lab at MIT. Its excess power ranged from 167% to 267% as Dr. Swartz altered the experimental conditions. This excess heat, as measured by his precision calorimeter, persisted from Sunday, August 24 to August 30, longer than ICCF10 itself. The excess heat was interrupted on the last day only to bring the equipment back to Wellesley, Massachusetts—otherwise it would have continued much longer.
- Prof. John Dash of the physics department at Portland State University in Oregon and his summer high school student interns also put on historic demonstrations of excess heat at Prof. Hagelstein's lab. They used simple but effective calorimetric apparatus, which allowed observers to check the level of excess heat for themselves. This proves that even high school students can be more effective on the frontiers of science than the U.S. Department of Energy and the 1,000-plus MIT professors who did *not* attend ICCF10. Only two MIT professors attended—Prof. Hagelstein and ex-Prof. Keith Johnson, both of whom have been involved in the field since its early days. (This, despite the 150 to 200 ICCF10 posters that I had earlier placed around MIT and a prominent ad in the *Boston Globe* which Prof. Hagelstein paid for from his personal funds.) Only a few MIT students showed up—outnumbered by the high school students in Prof. Dash's group from Portland State University in Oregon. (It should be noted that the both the *Boston Globe* and the *Boston Herald* chose to boycott the conference, despite hav-

ing been repeatedly alerted about its significance.)

- What is now being called the Letts-Cravens Effect—excess heat stimulated by laser light irradiation of cold fusion electrolytic cell cathodes—has now been independently observed by three outside groups: Dr. Michael McKubre of SRI International, Dr. Edmund Storms in New Mexico, and Dr. Mitchell Swartz in Wellesley, Massachusetts. This phenomenon, you may recall, was the subject of the “Fire from Water” cover story in the last issue of *IE*. Low-level laser light power is input and a huge power excess emerges, for example: 30 milliwatts input, 1 watt output (a 30-fold multiplication of input power). This is evidently a highly repeatable effect—one that has the potential of breaking through into numerous other labs around the world.
- Dr. James Patterson and his colleagues from Sarasota, Florida revealed a stunningly simple, robust, and ingenious gas-phase cold fusion reactor that has produced excess heat for months on end. Full details will be provided to the public in the near term; he is not seeking patent protection at this point.
- Helium-4 correlated with excess heat has been observed now in a solid-state LENR device by a laboratory effort sponsored by the Italian government.
- The astonishing nuclear transmutation experiment carried out by the Iwamura group at Mitsubishi Heavy Industries Advanced Technology Division, which was reported in *Infinite Energy* (#47, pp. 14-18) and later published in the *Japanese Journal of Applied Physics*, has now been reproduced by the A. Takahashi group at Osaka University. In this experiment, deuterium (heavy hydrogen) gas is made to flow through a palladium membrane onto which another element, such as cesium or strontium, has been deposited. With no energy input (other than the pressure of the gas) the deposited element transmutes to another element. For example, cesium declines and the rare earth element prae-sodymium appears and grows. Or, strontium declines and molybdenum grows. The term “grow” is appropriate since, to make the new elements, it is necessary for the starting nuclei to “absorb” four deuterium nuclei! Obviously, this flies completely in the face of every canon of basic chemistry, but the evidence for the result is now overwhelming. It is nothing short of modern alchemy.
- Finally, we are delighted to report that a company in Israel, Energetics Technologies Limited, which began its multi-million dollar cold fusion effort only two years ago, has already achieved excess heat in a variety of processes. Funded by investors in the United States, the fifteen-member staff of Energetics Limited is aiming directly at the commercialization of the technology. The leader of the effort, Dr. Arik El-Boher, made a stunning presentation at ICCF10, which caused many jaws to drop.

There is much more, but I need to end these highlights. Though the “cold fusion war” has not yet been won—and it could still be lost—the field seems to have picked itself up with the remarkable turning point of ICCF10. ICCF11 will be in Marseilles, France in October 2004.