BREAKING THROUGH EDITORIAL

At 16, Cold Fusion is Coming of Age

Scott Chubb

Two days before my son was born I took my wife to see her obstetrician. While I was in the waiting room, I picked up a copy of *Time* Magazine. There, on the cover, was a picture of Stanley Pons and Martin Fleischmann, holding a cold fusion cell, above the words: "Fusion or Illusion? How Two Obscure Chemists Have Turned the Physics World on its Head." This spring, my son, who is now 16, took an introductory driver education course. Although he has not yet been out on the road, the fact that he could be, and the fact that he will be, have had a sobering impact on me: My son in the truest sense is *coming of age*. He could lose his life, tragically, in an automobile accident, probably not now, but sometime in the future, if he acts irresponsibly. But the important point is that he can act responsibly. If he does, I believe he will be fine.

As I was thinking about recent events associated with cold fusion, it occurred to me that the field, like my son, is also coming of age. But, as opposed to finding this a sobering idea, it struck me that cold fusion's coming of age, in one sense, is really refreshing. In particular, as you will read in different articles by me in this issue, two vibrant gatherings (one at MIT and one at the 2005 March Meeting of the American Physical Society) took place recently that involved mainstream scientists. The exchanges included not only new and novel results, including a first-ever video of a demonstration, in real time, by Roger Stringham, of a working cold fusion device, but also, in more general terms, a sense of excitement and interest in cold fusion by conventional physicists. Also, between May 13-16, 2005, an additional important cold fusion event took place: a conference in Siena, Italy, that was sponsored jointly by Siena University, the International Society of Condensed Matter Nuclear Science (ISCMNS), Ecodep Srl, and Frabosk SpA di Lumezzane(BS). We plan to include a summary of this event in the next issue.

On the other hand, cold fusion's coming of age, as in my son's coming of age, also involves a potential downside: with age comes greater responsibility and the need to be held accountable for one's actions, as well as the greater possibility of being harmed, either as a result of deliberate or indirect acts. An extraordinary aspect of the dialogue (or lack of dialogue) about cold fusion has been a failure, until now, by mainstream physicists to take any of the results associated with the field seriously. This failure not only continues to take its toll on the field, with skyrocketing oil prices, potentially, it is becoming an issue of national importance.

Direct acts (or failures to act) that continue to harm the field include: 1) The decision by Seth Gordon and other individuals from the Cleveland Playhouse to stage a parody of cold fusion, "Restoring the Sun," and to provide inaccurate information about the field, without learning the facts; and 2) Dartmouth theater professor (and playwright) Joseph Sutton's portrayal of cold fusion in this play, which is based on outdated and grotesquely inaccurate information. (The play, "Restoring the Sun," despite its inaccurate portrayal of cold fusion, could serve a useful purpose. In particular, if an appropriate disclaimer or introduction is included, "Restoring the Sun" actually could help dispel the *myth* that cold fusion does not exist. Gordon and/or Sutton can make this happen, and they should.)

Indirect acts that have harmed the field have evolved as a result of the failure by editors of the more prominent scientific journals (*Nature*, *Science*, and *Physical Review*) to obtain reviews by qualified experts of the field. In particular, recently this has spawned a chilling scientific environment, in which, in order to have their work published, a number of authors of theoretical papers have deliberately omitted references to scientific works that have been published in non-refereed and refereed journals (in particular, in ICCF conference proceedings and *Fusion Technology*) that are known to publish cold fusion papers.

Besides the summaries of the APS session and the MIT colloquium, in this issue there are two additional cold fusion/LENR articles. These include: 1) An article by Roger Stringham and Kip Wallace, concerning a successful effort to generate excess heat using a modified version of the sonofusion device, initially developed by Ken Rauen and Eugene Mallove; and 2) An article by Talbot Chubb, concerning an extension of the ion band state model (developed initially by Talbot and me to explain excess heat in Pons-Fleischmann cells).

In addition to these articles, Evan Ragland presents a novel "alternate model" for describing most of modern physics, which is based on an alternative view of reality than the conventional one. In a similar vein, in his article, "Two Competing Cosmological Theories," Arnold Gulko describes an unconventional cosmological theory (The Universe Cycle Theory), in which, as opposed to using the assumption that a single primordial event started the universe (the basis of the conventional Big Bang theory), it is postulated that

everything started with an infinite space, containing a uniform distribution of matter on a very large scale.

In his paper, "Matter, Antimatter, and Unmatter," Florentin Smarandache also describes an alternative view of reality. However, his picture is somewhat more conventional: He postulates that certain forms of antimatter (for example, anti-neutrons) can bind to conventional matter, leading to new forms of reality, which he refers to as unmatter. An interesting point is that unmatter, if it exists, in most respects would look just like matter or antimatter, but it may have useful properties that could result from unmatter becoming matter or antimatter through collisions or other processes. The seventh and eighth articles, respectively, by David Moon and E.D. O'Brian, deal with devices. Moon's article ("The Nucleovoltaic Cell") deals with the problem of converting energy from deuteron-deuteron fusion directly into electricity. In his article, "Tesla's Electrolytic Clock," O'Brian provides some history about a relatively unknown fact—that Nikola Tesla invented a form of electric clock, at a time when the traditional, mechanical forms of clocks were being used. Although no existing drawings of the clock exist, O'Brian provides a partial rendition of a picture of what it might have looked like, based on information he obtained through the Tesla Museum, Belgrad, Serbia.