

LETTERS TO THE EDITOR



COMMENTS ON COLD FUSION

Do you really want to rapidly publish a bunch of "half-baked" work on cold fusion? I expect that Pons and Fleischmann will find the error in their power balance within the next month or so, and all those authors will be desperately trying to withdraw their papers.

Bill Nevins

Lawrence Livermore National Laboratory
P.O. Box 5511, L-630
Livermore, California 94550

April 22, 1989

EDITOR'S RESPONSE TO "COMMENTS ON COLD FUSION"

Dr. Nevins certainly has raised an important issue. I considered the possibility that cold fusion might not work and discussed this with several members of the editorial advisory board prior to putting out the Call for Technical Notes on the topic. The decision was a judgment call, but we felt that the potential importance of the topic and the benefit to the field offered by this publication avenue outweigh the "downside." Certainly, as time passes and the practicality of cold fusion is better understood, authors submitting technical notes may look back and realize that their note missed the mark. On the other hand, some of these contributions may provide key insight and directions for this new field. Of course, this is always the risk that an author takes, but here the risk is emphasized because the review of these notes stresses ingenuity and permits speculative studies. Even if the field "dies" in a few months, it may come back later (witness the early attempts in the Federal Republic of Germany to generate helium using a palladium process somewhat analogous to the present cold fusion work). In that case, it would be helpful to have documented thinking that developed during present studies.

Since, in addition to being an editor, I have also been doing some personal research on cold fusion, I cannot help but add some more personal observations. As I stated in testimony before the House Committee on Science, Space, and Technology, April 26, 1989, on Recent Developments in Fusion Energy Research:

The experiments at Illinois have not yet produced definitive results. However, based on other reports, I am personally convinced that solid-state catalyzed cold fusion occurs, and this is an unexpected and very important new regime of physics. The fusion I refer to, however, is the conventional D-D reaction, and the reaction rate is quite low. There is not yet sufficient data to evaluate the possibility of a high-reaction-rate, heat-producing reaction such as reported by the University of Utah workers. Rather than debate that issue now, for the present discussion I will simply assume that this is possible and consider some of the consequences. (Let me stress that I hope that this turns out to be true, but there are clearly many unanswered questions.)

Based on this view, I doubt that the field will "die" even if the "unidentified" heat-producing reaction fails to be thermonuclear in origin. Muon-catalyzed fusion exists and may even be enhanced with the deuterium held in a solid lattice. This area, combined with the low reaction rate type of cold fusion reported by Brigham Young University scientists, could open a whole new field of basic physics for fusion. The result might never lead to fusion power plants, but who knows what interesting and important applications may emerge? Thus, I again believe that opening the door to speculative technical notes on the subject is appropriate.

*George H. Miley, Editor
Fusion Technology*

University of Illinois
Fusion Studies Laboratory
103 South Goodwin Avenue
Urbana, Illinois 61801

May 8, 1989