

The San Francisco Tesla Society



Presents a free lecture by Michael McKubre, Ph.D.

"Solid State Nuclear Effects in the Deuterium/Palladium System"

Sunday, September 10, 2000 1:00 p.m. at 3220 Sacramento Street (near Lyon) San Francisco, California

On March 23, 1989 Martin Fleischmann and Stan Pons made an announcement that astounded the world regarding possible "cold fusion" reactions resulting from their experimental electrochemical insertion of deuterium into palladium cathodes. Their controversial and hard to reproduce University of Utah experiment precipitated huge excitement, optimism and scientific rivalry. Professors around the world emerged from their offices into the light of their laboratories, for the first time in decades, in order to be the "first to reproduce". Lacking information, skill and fortitude, and driven by an urgent sense to be "first", most of these experiments were flawed to the point that no interpretation could be made to support a subtle, extreme and superficially "impossible" observation. The failure of so called "cold fusion" to conform to the expectations of "hot fusion" experimental observations posed a dilemma for advocates of both disciplines. For the proponents of "cold fusion", the dilemma was comfortably, if not comprehensively resolved by the statement of Nobel Laureate Julian Schwinger, that: "the circumstances of cold fusion are not those of hot fusion". Even though a number of scientists have publicly shunned "cold fusion" and still consider it to be theoretically impossible, a number of dedicated individuals have continued to investigate the phenomena.

MICHAEL C.H. McKUBRE, Ph.D. is Director of the Energy Research Center at the Physical Sciences Division of SRI International in Menlo Park, California. He is the author of two theses and more than ninety papers in scientific journals, books, conference proceedings, and published technical reports. Work at SRI to resolve the general question "Can nuclear effects be facilitated by a crystalline lattice?", has proceeded continuously since March 23, 1989, with funding from the Electric Power Research Institute (EPRI), the U.S. Government and the Japanese Government. SRI experiments have demonstrated clear evidence of an anomalous heat effect under conditions that are difficult to achieve, but are relatively well defined. The magnitude of this effect is between a factor of 100 and 1000 times larger than can be accounted for by known chemistry. More recent work has been directed towards demonstrating a correlation between the rates of excess heat and nuclear product release; in this case helium-3 and helium-4. These experiments will be discussed.

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