Remembrances of Michael E. Melich

David J. Nagel

My first meeting with Mike Melich was not memorable. That happened during the early years when he was at the Naval Research Laboratory, NRL (1976-1985). So, Mike and I knew each other for most of four decades. We did not start to interact frequently until after the March 1989 announcement of cold fusion by Fleischmann and Pons. Mike was a Professor at the Naval Postgraduate School in Monterey, California at that time. But, he spent a lot of time in Washington, D.C., as well as at his home in Florida. He also travelled abroad a lot. I recall phoning him once, and asking him where he was then. He replied "Japan." Mike had a highly delocalized wave function!

Rather than organize these recollections chronologically, I will use Mike's many professional and personal activities as the architecture of what follows.

Physicist. Mike had multiple degrees in Physics: a B.S. from Stanford (1961), an M.S. (1963) and a Ph.D. (1967), both from Rice University. His graduate research involved flux quantization in superconductors. His Ph.D. thesis was both experimental and highly mathematical. Mike had a remarkable "bandwidth" in solid-state and nuclear physics. He and I would talk frequently about the interpretation of LENR experiments, and the potential mechanisms behind what was measured. Those conversations were invariably both interesting and pleasant. I have a thick file of notes from discussions with Mike.

Researcher and Technologist. Although he performed many other functions, Mike was a scientist who wanted to understand LENR and diverse other topics. He knew how to perform and manage scientific research. In 2010, Mike organized two tests with Andrea Rossi, which included scientists from NRL and myself. He designed a flow calorimeter system for the tests, with a 10 kW resistive water heater as a thermal power reference in the system. It was used in New Hampshire in June, and also in a company near Washington, D.C. in the fall of that year. When we went to New Hampshire, we did not have a good means of measuring the electrical power input to Rossi's unit. Mike got on the internet, found a suitable system in California, and had it sent overnight to New Hampshire at a cost of $400. We got both current and voltage measurements at 50 kHz with that unit. The tests with Rossi were the result of Mike and his wife, Marianne Macy, spending a great deal of time with Rossi not long before the 2010 tests. Mike also arranged for a test of a reported LENR reactor in the Athens laboratory of Defkalion in 2012. He brought a small team of us to Greece for that test. Those tests were done well, but were not conclusive.

Engineer and Teacher. Mike was a professor in the Combat Systems Engineering Department of the Naval Postgraduate School for three decades. He taught some courses and mentored work by the students, who were mid-grade Naval Officers. I recall being struck by the number of admirals that Mike knew personally. They were once students at Monterey, who later were very successful in the U.S. Navy. I never heard Mike give an academic lecture, but it was clear from our conversations that he enjoyed teaching.

Inventor. A search of the data base of the U.S. Patent and Trademark Office did not turn up any patents held by Mike. But, I know from my own experience that he was a creative person. Mike and I would sometimes room together at an ICCF conference to save money. That was the case for ICCF12 in Yokohama in 2005. When we were both awake in the middle of one night, we discussed means to measure the flexure of ships in rough seas. A video of the significant bending of a large ship can be seen at: https://www.youtube.com/watch?v=rHlEXn37dVg. Mike and I came up with a system to do quantitative and continual monitoring of ship flexure with high precision. Later, a student made a prototype of the system at The George Washington University.

Program Manager. Mike had a great deal of experience in organizing programs, getting them funded, and then managing them. I heard about some of them only briefly. One example was a program for an articulated tracked vehicle that Mike managed. But, I was closer to his work with LENR programs. When he and I first heard Yasuhiro Iwamura describe his transmutation results at ICCF9 in Beijing in 2002, we went back to the hotel and did calculations about production rates. Whether or not significant amounts of important elements could be produced by transmutations

David Nagel and Mike Melich, 2012.

was the question. Later, Mike obtained over a million dollars of research funding from the Department of Defense to pursue the reality and efficacy of transmutations using Iwamura's Pd foil permeation method.

LENR Leader. Mike's interest in LENR had two bases. One was its origin in Utah, where Mike was born. His father was a lawyer on the commission that provided $5M of state money to the National Cold Fusion Institute soon after the Fleischmann and Pons announcement. The other basis for Mike's interest was the challenging science and potential importance of LENR. He, like many of us, was attracted by the dual challenges of understanding and commercialization. Mike was able to work on all levels from wave functions to politics. He and his close colleague, Rod Johnson, brought Bayesian analyses to the assessment of the reality of LENR. Mike and I co-chaired ICCF14 in Washington, D.C. in 2008. Thanks to him, the program included some commissioned review papers, presentations on country histories in LENR, and a session honoring two pioneer scientists in the field. Mike got almost all of the money, again from the Department of Defense, about a quarter of a million dollars, for that conference.

Mike Melich and Marianne Macy, 2007.

Friendships. Mike was an outgoing, gregarious and good natured fellow. So, he interacted well with a very wide range of people, and made many friends. His friends were very diverse, and included men and women from many cultures and other categories. Mike and I talked a few times a month, on average. Due to our frequent interactions and various collaborations, Mike and I became professional friends. That evolved into a personal friendship. I could always count on Mike as a confidant and critic. I miss him and our discussions of a very wide range of topics.

Gayle and Marianne. Mike and Gayle were married for 35 years until she died of cancer in 2005. I recall that Mike was very energetic in trying to find the best medical assistance for Gayle. I have a photo of Mike and Gayle from ICCF8 in Lerici during 2000, which I like. Unfortunately, I was not able to find it for this remembrance. I was at ICCF13 in Sochi during 2007, when Mike and Marianne met. This is a photo of them I took at the conference reception. They married in 2009, to the great benefit of both of them. It does not surprise me that Mike married two intelligent, kind and attractive women. He was a real gentleman, in addition to being a very interested and interesting person.

Other Recollections. Mike was an avid reader, and would buy many books. He read on a wide variety of topics. In Florida, he had the entire second floor of one of his houses opened into a giant library and office. For most of his professional life, Mike had homes in multiple states, usually Utah, and also Florida and, later, Maryland. Often, when we talked, he would be dealing with some supplier or craftsman to get something done on one of the properties. He probably could have been a successful real estate developer. It is also possible that Mike could have been a good medical doctor. He dug into details of cancer and other maladies, even to the point of going to conferences on different medical topics. But, Mike was most devoted to the cause of Science in the service of National Defense. Sometimes, people who work for the U.S. government get a bad rap. Mike's life was a sterling example of the Government attracting the "best and brightest."

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