

DOCUMENTATION OF LENR INVESTIGATIONS BY MELVIN MILES AT THE U.S. NAVAL AIR WEAPONS CENTER, CHINA LAKE – AND BEYOND

*A PROJECT OF THE LENR RESEARCH
DOCUMENTATION INITIATIVE*

**THIRD DRAFT REPORT, VOLUME 1
(REVISION 1)**

Melvin Miles, Ph.D., Retired
St. George, Utah

Thomas W. Grimshaw, Ph.D.
LENRGY, LLC
Austin, Texas



August 11, 2020

Contents

1	Introduction	4
2	Publicly-Available Documents	7
2.1	U.S. Navy and Other LENR Reports	7
2.2	Comprehensive List of Publications	9
3	Electronic Files.....	18
3.1	Files on Laptop Computers.....	18
3.2	Files on CDs	21
4	Hardcopy Records: Notebooks.....	25
4.1	Lab Notebooks, Naval Air Weapons Center, China Lake.....	25
4.2	Lab Notebooks, New Hydrogen Energy, Japan.....	29
4.3	Activities and Events Notebooks.....	29
5	LENR Library	33
5.1	ICCF Conference Proceedings.....	33
5.2	LENR Books.....	37
5.3	Video Recordings (VHS Tapes).....	38
5.4	Photographs	41
5.5	Conference Posters	41
6	Interviews	45
7	Martin Fleischmann Correspondence Files.....	46
7.1	Penultimate Papers, Part IV	46
7.2	Fleischmann Manuscript on NHE Data	46
7.3	Fleischmann Manuscript: “Long Letter”	48
7.4	Miscellaneous Martin Fleischmann Papers	48
7.5	“Letters from Martin Fleischmann to Melvin Miles” (Introduction by Jed Rothwell)	48
8	Research Phases	52
8.1	Pre-LENR Research.....	52
8.2	LENR Research at NAWC	53
8.3	Research at New Hydrogen Energy, Japan.....	56
8.4	Continued Professional Activities in LENR.....	59
8.5	LENR Research Summary.....	62
9	Future Opportunities	63
10	Project Methods.....	64

Appendices (Volume 2)..... 67

Appendix A. Cold Fusion Papers by Dr. Miles 67

Appendix B. Identifications of Individuals, Etc. in Dr. Miles Photos..... 67

Appendix C. Transcriptions of Dr. Miles Interviews 67

 Interview Set 1, May 2019 67

 Interview Set 2, July 2019..... 67

1 Introduction

Cold fusion (CF) was announced on March 23, 1989, by Dr. Martin Fleischman and Dr. Stanley Pons. The immense potential energy benefits of CF (also referred to as Low Energy Nuclear Reactions, LENR) were immediately recognized. Humankind’s need for a source of cheap, clean, inexhaustible, and safe energy seemed to be realized. However, LENR was rejected by mainstream science within a few months, and it remains highly marginalized to this day. On the other hand, the phenomenon has continued to be rigorously pursued by many investigators in several countries. The mounting evidence for the reality of LENR shows that its potential benefits may yet be realized.

Because it is a “pariah” science, LENR has attracted relatively few new investigators to the field. Many of the researchers became active in the early months and years after the 1989 announcement. Now 30 years later many of these investigators are leaving the field for health reasons (or death). The results of their many years of LENR investigation are at risk of being lost, which would be extremely unfortunate not only for the field, but also potentially for humanity.

An initiative is underway to mitigate the risk of loss of research records of LENR investigators. Its objectives are to collect, organize, document, and archive these records. It is being performed at LENRGY, LLC¹ in Austin, Texas. The LENR Research Documentation Initiative (LRDI) assists researchers in making sure that their efforts are preserved and to keep the records available for additional analysis and interpretation. The LRDI began with a pilot project with Dr. Edmund Storms and now includes 21 projects with 16 participants. It is described in a recent article in *Infinite Energy*² as well as on a dedicated website³.

Dr. Miles is one of the foremost researchers in the LENR field. He began his LENR research while at the Naval Air Weapons Center (NAWC), starting within about two days after the March 23, 1989 announcement. His goals were to determine if helium was produced in LENR along with excess heat

¹ LENRGY: LENR Energy – Pursuing the Benefits of Cold Fusion Realization. www.lenrgyllc.com.

² Grimshaw, T., 2020. Documenting Cold Fusion Research: Preserving a Vital Asset for Humankind. *Infinite Energy*, Issue 150, March/April 2020, p. 9-13.

³ LENR Research Documentation Initiative: Collection, Organization, Description, Archiving of LENR Research Records. www.lenr-documentation.org.

and to show that the ratio of production of helium to energy release is the same as in plasma fusion reactions⁴. Dr. Miles was successful in answering both of these questions affirmatively. A photo of Dr. Miles is in Figure 1-1.



*Figure 1-1.
Mel Miles in the Back Yard of His Home in St. George, Utah.
Photo Taken May 2019*

Dr. Miles received his BA degree in 1962 in chemistry (minor in mathematics) at Brigham Young University. He then pursued a PhD in physical chemistry (minor in physics) at the University of Utah, working under Henry Eyring and Edward Eyring. His dissertation was entitled “Temperature Jump Kinetic Studies of Substituted Malonic Acids”. He then received a NATO Post Doctoral Research Fellowship award and studied electrochemistry at an institute in Germany.

Dr. Miles then held a position at the Naval Ordnance Laboratory in Corona, California for two years and subsequently became assistant (and associate) professor at Middle Tennessee State University for about nine years. During this period, he had summer appointments at the Naval Air Weapons

⁴ Rothwell, J., Introduction to the Cold Fusion Experiments of Dr. Melvin Miles. Infinite Energy, 1997. 3(15/16): p. 27. Revised and updated, 2004.

Center (NAWC) at China Lake, California (then the Naval Weapons Center, NWC⁵) and at Brookhaven National Laboratory. In 1978 he became a research electrochemist at NAWC and held that position, with temporary assignments at other organizations and locations, until he retired in January 2002. More detail on Dr. Miles' LENR work at NAWC is provided in Section 8.

A project has been initiated under the umbrella of the LRDI to document Dr. Miles' LENR research. The objective of the Miles LENR Research Documentation Project (MLRDP) is to collect and record as much of Dr. Miles' research record as possible. This third draft of the MLRDP report presents the results of the information collection and interviews of Dr. Miles. The components of research record include publications and unpublished reports, electronic files, hardcopy records (lab notebooks and related notebooks), and LENR library materials (books, conference proceedings, video recordings). Two sets of interviews of Dr. Miles regarding his LENR and other research have been conducted and included in the Project.

The phases of Dr. Miles' LENR research are summarized, and future potential work is suggested. Memos were used to record the findings as progress was made. A folder on Dropbox has been set up to store the Project documents. More information on how the MLRDP is being conducted is in Section 10. Of particular interest in the Project is a large set of letters and other correspondence with Dr. Martin Fleischmann, co-founder of LENR, which range from 1992 to 2008.

This Volume 1 of the MLRDP report includes the report sections, and Volume 2 provides the three appendices. A preliminary draft report was provided to Dr. Miles on July 15, 2019, and a second draft was submitted on March 26, 2020. Additional records and memos have been added for the third draft report.

Dr. Miles' spouse, Linda, is acknowledged for her vital role and collection collecting information for the Project. The Anthropocene Institute has provided funding for LRDI expenses.

⁵ The Naval Air Weapons Station (NAWS) has had several names over the course of its history – Naval Ordnance Test Station (NOTS, 1943), Naval Weapons Center (NWC, 1967) and Naval Air Weapons Station (NAWS, 1992). Dr. Miles worked in the Weapons Division of the Naval Air Warfare Center, so the acronym NAWC is used in this report.

2 Publicly-Available Documents

Dr. Miles has authored over 200 reports and other publications, many of them on his LENR research. Some of the publications in his possession were scanned during onsite visits, and a comprehensive list of his LENR works has been prepared.

2.1 U.S. Navy and Other LENR Reports

Among his collection of LENR materials, Dr. Miles has five reports prepared by the NAWC and by the U.S. Navy Space and Air Warfare Systems (SPAWAR)⁶. The reports are listed below, and copies have been included in the Project Dropbox folder.

Miles, M., B. Bush, and K.B. Johnson, 1996. Anomalous Effects in Deuterated Systems, Final Report. Naval Air Warfare Center, Weapons Division. September.

S. Szpak and P. Mossier-Boss, 1995. Anomalous Behavior of the Pd/D System. Technical Report 1696. September.

Miles, M., M. Fleischmann, and A. Imam, 2001. Calorimetric Analysis of a Heavy Water Electrolysis Experiment Using a Pd-B Alloy Cathode. Naval Air Warfare Center Weapons Division, Chemistry and Materials Division, Research Department. NRL/MR/6320--01-8526. March 26.

Szpak, S., and P. Mosier-Boss, eds., 2001. Thermal and Nuclear Aspects of the Pd/D₂O System. Volume 1: A Decade of Research at Navy Laboratories.

Szpak, S., and P. Mosier-Boss, eds., 2001. Thermal and Nuclear Aspects of the Pd/D₂O System. Volume 2: Simulation of the Electrochemical Cell (ICARUS) Calorimetry.

In addition to the reports by Navy organizations, Dr. Miles' collection includes about 25 other printed reports⁷ (Table 2-1). The reports have been scanned in three parts and are included in the Project Dropbox folder.

⁶ U.S. Navy Reports in Your Collection of Documents. Memo to Mel Miles from Tom Grimshaw. May 28, 2019.

⁷ Hardcopy LENR Papers for the Miles LENR Research Documentation Project. Memo to Mel Miles from Tom Grimshaw. January 26, 2020.

Table 2-1
List of Printed Publications in Dr. Miles' LENR Materials

PART 1	Year
Electrochemical Calorimetric Studies on the Electrolysis of Water and Heavy Water (D2O) (2 copies).	1990
Electrochemical Calorimetric Studies of the Cold Fusion Effect	1990
Anomalous Effects Involving Excess Power, Radiation, and Helium Production during D2O Analysis Using Palladium Cathodes	1993
Calorimetric... Electrolysis (not scanned)	1994
Electrochemical Loading of Hydrogen and Deuterium into Palladium and Palladium-Boron Alloys	1996?
Reply to "Examination of Claims of Miles et al. in Pons-Fleischmann-Type Cold Fusion Experiments"	1998
Reply to "An Assessment of Claims of Excess Heat in Cold Fusion Calorimetry"	1998
Radiation Measurements at China Lake: Real or Artifacts?	1998
Calorimetry... Co-Deposition (not scanned)	1999
Calorimetric Studies of Pd/D2O + LiOD Electrolysis Cells	2000
The Elevation of Boiling Points in H2O and D2O Electrolytes	2002
Critical Analysis of Cold Fusion Calorimetric Data Reported by CalTech Scientists	2018?
PART 2	
II Annual Conference on Cold Fusion, Bulletin 2, Scientific Program (Agenda)	1991
Thermal Behavior of Polarized Pd/D Electrodes Prepared by Co-Deposition	2004
Palladium-Boron Alloys and Methods for Making and Using Such Alloys (US Patent Office)	2004
Review of Twenty Years of LENR Research Using Pd/D Co-Deposition	2011
Electrochemistry and Calorimetry of Ruthenium Co-Deposition	2012
Investigations of Possible Shuttle Reactions in Co-Deposition Systems	2012
Thermodynamic and Kinetic Observations Concerning the D + D Fusion Reaction for the Pd/D System	2015
Introduction to Fleischmann's Analysis of My Codeposition Experiment	2017
Our Penultimate Papers on the Isoperibolic Calorimetry of the Pt-D2O and Pd-D2O Systems, Part 3: The Pd-D Codeposition System	2017
Thermodynamic and Kinetic Observations Concerning the D + D Fusion Reaction for the Pd/D System (Second Copy)	2015
The Fleischmann-Pons Calorimetric Methods, Equations and New Applications	2017
PART 3	
Theoretical Neutron Flux Levels, Dose Rates, and Metal Foil Activation in Electrochemical Cold Fusion Experiments	1990
Bush, B.F., et al., Helium production during the electrolysis of D2O in cold fusion experiments. J. Electroanal. Chem., 1991. 304: p. 271.	1991 ⁸
Miles, M., et al. Heat and Helium Production in Cold Fusion Experiments. in Second Annual Conference on Cold Fusion, "The Science of Cold Fusion". 1991. Como, Italy: Societa Italiana di Fisica, Bologna, Italy.	1991 ¹⁰

⁸ These items were identified by Dr. Miles but were not scanned for the Project.

2.2 Comprehensive List of Publications

Dr. Miles has provided a list of these publications as part of his professional biography⁹. Two additional lists (including over 280 items) of Dr. Miles' publications were provided by Dr. David Nagel¹⁰. In addition, Jed Rothwell's website, LENR-CANR.org, was searched for Dr. Miles' publications¹¹. These lists are included in Appendix A.

The list in Dr. Miles biography is about the same as one of the lists from Dr. Nagel, Consequently, the two lists by Dr. Nagel and the list from LENR-CANR.org have been combined and reviewed. For each duplicated item, the reference with the most complete citation was (in general) selected. The resulting compiled list without redundant items has about 145 items. Table 2-2 show the items along with the source for each:

#1 – LENR-CANR.org

#2 – Nagel List 2 (Attachment B of January 9, 2019 Memo)

#3 – Nagel List 1 (Attachment A of January 9, 2019 Memo)

⁹ Melvin Miles Professional Biography as of 2005. Memo to Mel Miles from Tom Grimshaw, July 14, 2019.

¹⁰ Nagel's Listing of Miles' CF/LANR Papers. Memo to Mel Miles from Tom Grimshaw. January 9, 2019.

¹¹ Listing of Miles' CF/LANR Papers on LENR-CANR.org. Memo to Mel Miles from Tom Grimshaw. March 2, 2019.

Table 2-2
Consolidated List of Dr. Miles' Publicly-Available LENR Documents

Year	Title	#
N/A	189. OUR PENULTIMATE PAPERS ON THE ISOPERIBOLIC CALORIMETRY OF THE Pt/D2O AND Pd/D2O SYSTEMS. PART I: THE Pt/D2O BLANK SYSTEM M. Fleischmann and M.H. Miles <i>Thermochimica Acta</i> (not published).	2
N/A	190. THE Pt/D2O AND Pd/D2O SYSTEMS. PART II: THE Pd-B AND Pd-B-Ce SYSTEMS M. Fleischmann, M.H. Miles and M.A. Imam SPARWAR System center San Diego, Technical Report (not published).	2
N/A	191. OUR PENULTIMATE PAPERS ON THE ISOPERIBOLIC CALORIMETRY OF THE Pt/D2O AND Pd/D2O SYSTEMS. PART III: THE Pd-D CODEPOSITION SYSTEM M. Fleischmann, M.H. Miles, S. Szpak and P.A. Mosier-Boss SPARWAR System center San Diego, Technical Report (not published).	2
N/A	192. OUR PENULTIMATE PAPERS ON THE ISOPERIBOLIC CALORIMETRY OF THE Pt/D2O AND Pd/D2O SYSTEMS. PART IV: AN EXPERIMENT WITH A Pd-CATHODE IN 0.1 M LiOD/D2O CARRIED OUT IN 1989. M. Fleischmann, M.H. Miles SPARWAR System center San Diego, Technical Report (not published).	2
1990	Miles, M., K.H. Park, and D.E. Stilwell, Electrochemical calorimetric evidence for cold fusion in the palladium-deuterium system. <i>J. Electroanal. Chem.</i> , 1990. 296: p. 241.	3
1990	Miles, M., K.H. Park, and D.E. Stilwell. Electrochemical Calorimetric Studies of the Cold Fusion Effect. in <i>The First Annual Conference on Cold Fusion</i> . 1990. University of Utah Research Park, Salt Lake City, Utah: National Cold Fusion Institute.	3
1990	Miles, M. and R.E. Miles, Theoretical neutron flux levels, dose rates, and metal foil activation in electrochemical cold fusion experiments. <i>J. Electroanal. Chem.</i> , 1990. 295: p. 409.	3
1990	Stilwell, D.E., K.H. Park, and M. Miles, Electrochemical Calorimetric Studies on the Electrolysis of Water and Heavy Water (D2O). <i>J. Fusion Energy</i> , 1990. 9(3): p. 333.	3
1991	HEAT AND HELIUM PRODUCTION IN COLD FUSION EXPERIMENTS. M. H. Miles, B. F. Bush, G. S. Ostrom, and J. J. Lagowski in " <i>Electrochemical Society Extended Abstracts</i> ", Vol. 91-2, p. 119, 1991.	1
1991	107. HEAT AND HELIUM PRODUCTION IN COLD FUSION EXPERIMENTS B. F. Bush, M. H. Miles, G. S. Ostrom, and J. J. Lagowski in "Electrochemical Society Extended Abstracts," Vol. 91-2, 119, 1991	2
1991	108. COLD FUSION EXPERIMENTER MILES RESPONDS TO CRITIC M. H. Miles in "21st Century Science and Technology," Vol. 5, No. 1, pp. 75-80, 1992	2
1991	113. EXPERIMENTAL EVIDENCE FOR CORRELATED HEAT AND HELIUM PRODUCTION IN COLD FUSION EXPERIMENTS M. H. Miles, B. F. Bush, G. S. Ostrom, and J. J. Lagowski in <i>Hydrogen Storage Materials, Batteries, and Electrochemistry</i> , D. A. Corrigan and S. Srinivasin, editor, The Electrochemical Society, pp. 287-297 (1991)	2
1991	Bush, B.F., et al., Helium production during the electrolysis of D2O in cold fusion experiments. <i>J. Electroanal. Chem.</i> , 1991. 304: p. 271.	3
1991	Miles, M., et al. Heat and Helium Production in Cold Fusion Experiments. in <i>Second Annual Conference on Cold Fusion, "The Science of Cold Fusion"</i> . 1991. Como, Italy: Societa Italiana di Fisica, Bologna, Italy.	3
1992	EXPERIMENTAL EVIDENCE FOR CORRELATED HEAT AND HELIUM PRODUCTION IN COLD FUSION EXPERIMENTS. M. H. Miles, B. F. Bush, G. S. Ostrom, and J. J. Lagowski in <i>Hydrogen Storage Materials, Batteries, and Electrochemistry</i> , D. A. Corrigan and S. Srinivasin, editor, The Electrochemical Society, pp. 287-297 (1991).	1
1992	Thermodynamic and Calorimetric Principles in Cold Fusion Experiments. M. H. Miles and B. F. Bush in <i>12th IUPAC Conference on Chemical Thermodynamics, Joint Meeting with the 47th Calorimetry Conference</i> , 16-21 August 1992, Snowbird, Utah, Program, Abstracts, and Reports, p. 194.	1

1992	Miles, M. and B.F. Bush. Calorimetric Principles and Problems in Pd-D ₂ O Electrolysis. in Third International Conference on Cold Fusion, "Frontiers of Cold Fusion". 1992. Nagoya Japan: Universal Academy Press, Inc., Tokyo, Japan.	3
1992	Miles, M., Cold fusion experimenter Miles responds to critic. 21st Century Sci. & Technol., 1992. Spring: p. 75.	3
1992	Miles, M. and B.F. Bush. Search for Anomalous Effects Involving Excess Power and Helium During D ₂ O Electrolysis Using Palladium Cathodes. in Third International Conference on Cold Fusion, "Frontiers of Cold Fusion". 1992. Nagoya Japan: Universal Academy Press, Inc., Tokyo, Japan.	3
1993	Search for Anomalous Effects Involving Excess Power, Helium, and Tritium During D ₂ O Electrolysis Using Palladium Cathodes. M. H. Miles and B. F. Bush in <i>Frontiers of Cold Fusion</i> , H. Ikegami, Editor, Universal Academy Press, Inc., Tokyo, Japan, pp. 189-199 (1993).	1
1993	Calorimetric Principles and Problems in Pd-D ₂ O Electrolysis. M. H. Miles and B. F. Bush in <i>Frontiers of Cold Fusion</i> , H. Ikegami, Editor, Universal Academy Press, Inc., Tokyo, Japan, pp. 113-122 (1993).	1
1993	118. CORRELATION OF EXCESS ENTHALPY AND HELIUM PRODUCTION DURING D ₂ O AND H ₂ O ELECTROLYSIS USING PALLADIUM CATHODES in <i>Frontiers of Cold Fusion</i> , H. Ikegami, Editor, Universal Academy Press, Inc., Tokyo, Japan, pp. 189-199 (1993)	2
1993	121. CALORIMETRIC PRINCIPLES AND PROBLEMS IN MEASUREMENTS OF EXCESS POWER DURING Pd-D ₂ O ELECTROLYSIS M. H. Miles, B. F. Bush, and D. E. Stilwell <i>Journal of Physical Chemistry</i> , Vol. 98, pp. 1948-1952 (1994)	2
1993	Miles, M., et al., Correlation of excess power and helium production during D ₂ O and H ₂ O electrolysis using palladium cathodes. <i>J. Electroanal. Chem.</i> , 1993. 346: p. 99.	3
1993	Miles, M. and B.F. Bush. Heat and Helium Measurements in Deuterated Palladium. in Fourth International Conference on Cold Fusion. 1993. Lahaina, Maui: Electric Power Research Institute 3412 Hillview Ave., Palo Alto, CA 94304.	3
1993	Miles, M., Letter to Steven E. Jones. 1993.	3
1994	HEAT AND HELIUM MEASUREMENTS IN DEUTERATED PALLADIUM SYSTEMS. M. H. Miles and B. F. Bush in <i>Proceedings of International Symposium on Cold Fusion and Advanced Energy Sources</i> , Minsk, Belarus, 1994, pp. 349-356.	1
1994	NUCLEAR PRODUCTS COMMENSURATE WITH ENERGY GENERATED DURING D ₂ O ELECTROLYSIS AT PALLADIUM CATHODES: QUANTITATIVE ANALYSIS. B. F. Bush, J. J. Lagowski, and M. H. Miles in <i>ACS Book of Abstracts, Division of Nuclear Chemistry and Technology</i> , Abstract No. 45, April 2-6, 1995.	1
1994	CORRELATIONS OF EXCESS POWER AND HELIUM PRODUCTION. M. H. Miles and K. B. Johnson in <i>ACS Book of Abstracts, Division of Nuclear Chemistry and Technology</i> , Abstract No. 59, April 2-6, 1995.	1
1994	124. PRACTICAL ASPECTS OF HEAT AND HELIUM MEASUREMENTS IN DEUTERATED PALLADIUM B. F. Bush and M. H. Miles in "Cold Fusion source Book," Hal Fox, Editor, Fusion Information Center, Salt Lake City, UT (1994)	2
1994	125. HEAT AND HELIUM MEASUREMENTS IN DEUTERATED PALLADIUM SYSTEMS M. H. Miles and B. F. Bush in <i>Proceedings of International Symposium on Cold Fusion and Advanced Energy Sources</i> , Minsk, Belarus, 1994, pp. 349-356	2
1994	Bush, B.F. and M. Miles. Practical Aspects of Heat and Helium Measurements in Deuterated Palladium. in <i>International Symposium on Cold Fusion and Advanced Energy Sources</i> . 1994. Belarusian State University, Minsk, Belarus: Fusion Information Center, Salt Lake City.	3
1994	Miles, M., B.F. Bush, and J.J. Lagowski, Anomalous effects involving excess power, radiation, and helium production during D ₂ O electrolysis using palladium cathodes. <i>Fusion Technol.</i> , 1994. 25: p. 478.	3
1994	Miles, M., B.F. Bush, and D.E. Stilwell, Calorimetric principles and problems in measurements of excess power during Pd-D ₂ O electrolysis. <i>J. Phys. Chem.</i> , 1994. 98: p. 1948.	3
1994	Miles, M. and B.F. Bush, Heat and Helium Measurements in Deuterated Palladium. <i>Trans. Fusion Technol.</i> , 1994. 26(4T): p. 156.	3

1995	Miles, M. The Extraction of Information From an Integrating Open Calorimeter in Fleischmann-Pons Effect Experiments. in 5th International Conference on Cold Fusion. 1995. Monte-Carlo, Monaco: IMRA Europe, Sophia Antipolis Cedex, France.	3
1996	ELECTROCHEMICAL INSERTION OF HYDROGEN INTO METALS AND ALLOYS. <u>Melvin H. Miles</u> and Kendall B. Johnson, <i>Journal of New Energy</i> , Vol. 1, No. 2, pp. 32-36, 1996.	1
1996	HEAT AND HELIUM MEASUREMENTS USING PALLADIUM AND PALLADIUM ALLOYS IN HEAVY WATER. <u>M. H. Miles</u> , K. B. Johnson, and M. A. Imam, in <i>Progress in New Hydrogen Energy</i> , M. Okamoto, Editor, Vol. 1, Japan, 1996, pp. 20-28.	1
1996	ELECTROCHEMICAL LOADING OF HYDROGEN AND DEUTERIUM INTO PALLADIUM AND PALLADIUM-BORON ALLOYS. <u>M. H. Miles</u> and K. B. Johnson, in <i>Progress in New Hydrogen Energy</i> , M. Okamoto, Editor, Vol. 1, Japan, 1996, pp. 208-212.	1
1996	IMPROVED, OPEN-CELL, HEAT CONDUCTION, ISOPERIBOLIC CALORIMETRY. <u>M. H. Miles</u> and K. B. Johnson, in <i>Progress in New Hydrogen Energy</i> , M. Okamoto, Editor, Vol. 2, Japan, 1996, pp. 496-501.	1
1996	REPLY TO S. E. JONES AND L. D. HANSON CONCERNING CLAIMS OF MILES, ET AL. IN PONS-FLEISCHMANN-TYPE COLD FUSION EXPERIMENTS. <u>M. H. Miles</u> in <i>Progress in New Hydrogen Energy</i> , M. Okamoto, Editor, Vol. 2, Japan, 1996, pp. 524-527.	1
1996	NUCLEAR PRODUCTS ASSOCIATED WITH THE PONS AND FLEISCHMANN EFFECT: HELIUM COMMENSURATE TO HEAT GENERATION, CALORIMETRY, AND RADIATION. B. F. Bush, J. J. Lagowski, and <u>M. H. Miles</u> , in <i>Progress in New Hydrogen Energy</i> , M. Okamoto, Editor, Vol. 2, Japan, 1996, pp. 622-626.	1
1996	130. ANOMALOUS EFFECTS IN DEUTERATED SYSTEMS <u>Melvin H. Miles</u> , Benjamin F. Bush, and Kendall B. Johnson NAWCWPNS TP 8302, Sept 1996	2
1996	131. ELECTROCHEMICAL INSERTION OF HYDROGEN INTO METALS AND ALLOYS <u>Melvin H. Miles</u> and Kendall B. Johnson <i>Journal of New Energy</i> , Vol. 1, No. 2, pp. 32-36, 1996	2
1996	Miles, M. and K.B. Johnson, Electrochemical insertion of hydrogen into metals and alloys. <i>Infinite Energy</i> , 1996. 1(5 & 6): p. 68.	3
1996	Miles, M. and K.B. Johnson. Improved, Open Cell, Heat Conduction, Isoperibolic Calorimetry. in Sixth International Conference on Cold Fusion, <i>Progress in New Hydrogen Energy</i> . 1996. Lake Toya, Hokkaido, Japan: New Energy and Industrial Technology Development Organization, Tokyo Institute of Technology, Tokyo, Japan.	3
1996	Miles, M. Reply to S. E. Jones and L. D. Hansen Concerning Claims of Miles, et al. in Pons-Fleischmann-Type Cold Fusion Experiments. in Sixth International Conference on Cold Fusion, <i>Progress in New Hydrogen Energy</i> . 1996. Lake Toya, Hokkaido, Japan: New Energy and Industrial Technology Development Organization, Tokyo Institute of Technology, Tokyo, Japan.	3
1997	138. REPLY TO "EXAMINATION OF CLAIMS OF MILES ET AL. IN PONS-FLEISCHMANN-TYPE COLD FUSION EXPERIMENTS" <u>M. H. Miles</u> <i>J. Phys. Chem. B</i> , Vol. 102, 1998, pp. 3642-3646	2
1997	140. ANOMALOUS HEAT AND HELIUM PRODUCTION USING PALLADIUM-BORON ALLOYS IN HEAVY WATER <u>M. H. Miles</u> , K. B. Johnson, and M. A. Imam <i>Proceedings of 32nd Intersociety Energy Conversion Engineering Conference</i> , 1997, pp. 1334-1337	2
1997	142. ELECTROCHEMICAL CALORIMETRIC STUDIES OF PALLADIUM AND PALLADIUM ALLOYS IN HEAVY WATER <u>M. H. Miles</u> <i>NEDO Final Report</i> , Tokyo, Japan, March 31, 1998	2
1998	ANOMALOUS HEAT AND HELIUM PRODUCTION USING PALLADIUM-BORON ALLOYS IN HEAVY WATER. <u>M. H. Miles</u> , K. B. Johnson, and M. A. Imam, in <i>Proceedings of 32nd Intersociety Energy Conversion Engineering Conference</i> , 1997, pp. 1334-1337.	1
1998	ELECTROCHEMICAL CALORIMETRIC STUDIES OF PALLADIUM AND PALLADIUM ALLOYS IN HEAVY WATER. <u>M. H. Miles</u> , <i>NEDO Final Report</i> , Tokyo, Japan, March 31, 1998.	1
1998	EXCESS HEAT MEASUREMENTS AND NUCLEAR DETECTION EXPERIMENTS IN THE NHE PROGRAM. K. Matsui, N. Asami, M. Sumi, H. Kamimura, A. Kubota, R. Shimada, S. Miyashita, A. Lipson, P. Tripodi, <u>M. Miles</u> and H. Watanabe, in <i>ICCF-7, Program Manual and Abstracts</i> , April 19-24, 1998, p. 96.	1

1998	RADIATION MEASUREMENTS AT CHINA LAKE: REAL OR ARTIFACTS?. M. H. Miles and B. F. Bush, in <i>Proceedings of the Seventh International Conference on Cold Fusion</i> , Vancouver, British Columbia, Canada, April 19-24, 1998, pp. 236-240	1
1998	Miles, M., Reply to 'An assessment of claims of excess heat in cold fusion calorimetry'. J. Phys. Chem. B, 1998. 102: p. 3648.	3
1998	Miles, M., Reply to 'Examination of claims of Miles et al. in Pons-Fleischmann-type cold fusion experiments'. J. Phys. Chem. B, 1998. 102: p. 3642.	3
1999	CALORIMETRY OF THE Pd+D CO-DEPOSITION. S. Szpak, P. A. Mosier-Boss and M. H. Miles, <i>Fusion Technology</i> , Vol. 36, 1999, pp. 234-241.	1
1999	REPORT ON CALORIMETRIC STUDIES AT THE NHE LABORATORY IN SAPPORO, JAPAN. M.H. Miles, in Asti Workshop on Anomalies in Hydrogen/Deuterium Loaded Metals, Conference Proceedings, Italian Physical Society, October 22-24, 1999.	1
1999	154. CALORIMETRIC STUDIES OF Pd/D ₂ O+LIOD/Pt ELECTROLYSIS CELLS M.H. Miles 35th ACS Western Regional Meeting, 37th SAS Pacific Conference, October 6-8, 1999, Abstract No. 255	2
1999	Miles, M. Production of helium in the cold. in 18th Annual Meeting of the Society for Scientific Exploration. 1999. Albuquerque, NM.	3
1999	Szpak, S., P. A. Mosier-Boss, and M. Miles, Calorimetry of the Pd+D codeposition. <i>Fusion Technol.</i> , 1999. 36: p. 234.	3
2000	ANOMALOUS HEAT AND HELIUM PRODUCTION IN THE PALLADIUM-BORON SYSTEM. M.H. Miles, M.A. Imam, and M. Fleischmann, in <i>Proceedings of 8th Russian Conference on Cold Nuclear Transmutation (RCCNT-8)</i> , Sochi, Russia, October 4-11, 2000, pp. 142-162.	1
2000	156. REPORT ON CALORIMETRIC STUDIES AT THE NHE LABORATORY IN SAPPORO, JAPAN M.H. Miles Asti Workshop on Anomalies in Hydrogen/Deuterium Loaded Metals, Conference Proceedings, Italian Physical Society, October 22-24, 1999	2
2000	157. CALORIMETRIC STUDIES AT THE NEW HYDROGEN ENERGY LABORATORY IN JAPAN M.H. Miles Bulletin of The American Physical Society, Series II, Vol. 45, No. 1, March 2000, Abstract C32	2
2000	158. "MY IMPRESSIONS AS A NEDO GUEST RESEARCHER AT THE NHE LABORATORY IN JAPAN" M.H. Miles <i>Infinite Energy</i> , Vol. 5, Issue 30, pp. 18-21, 2000	2
2000	Miles, M., M.A. Imam, and M. Fleischmann. "Case Studies" of Two Experiments Carried Out With the ICARUS Systems. in 8th International Conference on Cold Fusion. 2000. Lerici (La Spezia), Italy: Italian Physical Society, Bologna, Italy.	3
2000	Miles, M. Calorimetric Studies of Palladium Alloy Cathodes Using Fleischmann-Pons Dewar Type Cells. in 8th International Conference on Cold Fusion. 2000. Lerici (La Spezia), Italy: Italian Physical Society, Bologna, Italy.	3
2000	Miles, M., Calorimetric studies of Pd/D ₂ O+LiOD electrolysis cells. <i>J. Electroanal. Chem.</i> , 2000. 482: p. 56.	3
2000	Miles, M., M.A. Imam, and M. Fleischmann, Excess heat and helium production in the palladium-boron system. <i>Trans. Amer. Nucl. Soc.</i> , 2000. 83(371): p. 72.	3
2000	Miles, M., Report on Calorimetric Studies at the NHE Laboratory in Sapporo, Japan. <i>Infinite Energy</i> , 2000. 5(30): p. 22.	3
2001	CALORIMETRY OF Pd-D CODEPOSITION IN A FLEISCHMANN-PONS DEWAR CELL. M.H. Miles, S. Szpak, P. Mosier-Boss, and M. Fleischmann, in <i>Bulletin of the American Physical Society</i> , Seattle, Washington, 12-16 March, 2001, Abstract 5403.	1
2001	CALORIMETRIC ANALYSIS OF A HEAVY WATER ELECTROLYSIS EXPERIMENT USING A Pd-B ALLOY CATHODE. M.H. Miles, M.A. Imam, and M. Fleischmann, in " <i>Energy and Electrochemical Processes For a Cleaner Environment</i> ", C. Comninellis, M. Doyle and J. Winnick, Editors, The Electrochemical Society, Proceedings Vol. 2001-23, 2001, pp. 194-205.	1
2001	165. CALORIMETRIC ANALYSIS OF A HEAVY WATER ELECTROLYSIS EXPERIMENT USING A Pd-B ALLOY CATHODE M.H. Miles, M. Fleischmann, and M.A. Imam Naval Research Laboratory Report NRL/MR/6320-01-8526, March 26, 2001, 155 pp.	2

2001	166. CALORIMETRY OF Pd-D CODEPOSITION IN A FLEISCHMANN-PONS DEWAR CELL M.H. Miles, S. Szpak, P. Mosier-Boss, and M. Fleischmann Bulletin of the American Physical Society, Seattle, Washington, 12-16 March, 2001, Abstract 5403.	2
2001	169. CALORIMETRIC ANALYSIS OF A HEAVY WATER ELECTROLYSIS EXPERIMENT USING A Pd-B ALLOY CATHODE M.H. Miles, M.A. Imam, and M. Fleischmann 2001 Joint International Meeting of the Electrochemical Society/International Society of Electrochemistry, San Francisco, CA, 2-7 September 2001, Abstract No. 811.	2
2001	Miles, M., M.A. Imam, and M. Fleischmann, Calorimetric analysis of a heavy water electrolysis experiment using a Pd-B alloy cathode. Proc. Electrochem. Soc., 2001. 2001-23: p. 194.	3
2002	THERMAL AND NUCLEAR ASPECTS OF THE Pd/D ₂ O SYSTEM. VOL. I: A DECADE OF RESEARCH AT NAVY LABORATORIES. M.H. Miles, "Chapter 3: Excess Heat and Helium Production in Palladium and Palladium Alloys" in SPAWAR System Center San Diego, Technical Report 1862, S. Szpak and P.A. Mosier-Boss, Editors, February 2002, pp. 19-30.	1
2002	THERMAL AND NUCLEAR ASPECTS OF THE Pd/D ₂ O SYSTEM, VOL. II: SIMULATION OF THE ELECTROCHEMICAL CELL (ICARUS) CALORIMETRY. M. Fleischmann, M.H. Miles, M.A. Imam, P.A. Mosier-Boss and S. Szpak, "Chapter 4: Analysis of Experiment MC-21: A Case Study" in SPAWAR System Center San Diego, Technical Report 1862, S. Szpak and P.A. Mosier-Boss, Editors, February 2002, pp. 31-89.	1
2002	THE ELEVATION OF BOILING POINTS IN H ₂ O AND D ₂ O ELECTROLYTES. M.H. Miles, H.D. Arman, J.D. Carrick, C.K. Gren, K.A. Haggerty, H.Y. Kim, A.G. Ky, J.E. Markham, C.F. Meeks, and D.E. Noga, in Ninth International Conference on Cold Fusion, Abstracts, Beijing, China, May 19-24, 2002, p. 77.	1
2002	THERMAL BEHAVIOR OF POLARIZED Pd/D ELECTRODES PREPARED BY CO-DEPOSITION. S. Szpak, P.A. Mosier-Boss, M.H. Miles and M. Fleischmann, in Ninth International Conference on Cold Fusion, Abstracts, Beijing, China, May 19-24, 2002, p. 78.	1
2002	173. THERMAL AND NUCLEAR ASPECTS OF THE Pd/D ₂ O SYSTEM. VOL. I: A DECADE OF RESEARCH AT NAVY LABORATORIES M.H. Miles, "Chapter 3: Excess Heat and Helium Production in Palladium and Palladium Alloys" in SPAWAR System Center San Diego, Technical Report 1862, S. Szpak and P.A. Mosier-Boss, Editors, February 2002, pp. 19-30.	2
2002	174. THERMAL AND NUCLEAR ASPECTS OF THE Pd/D ₂ O SYSTEM, VOL. II: SIMULATION OF THE ELECTROCHEMICAL CELL (ICARUS) CALORIMETRY M.H. Miles, "Chapter 4: Analysis of Experiment MC-21: A Case Study" in SPAWAR System Center San Diego, Technical Report 1862, S. Szpak and P.A. Mosier-Boss, Editors, February 2002, pp. 31-89.	2
2002	175. THE ELEVATION OF BOILING POINTS IN H ₂ O AND D ₂ O ELECTROLYTES M.H. Miles, H.D. Arman, J.D. Carrick, C.K. Gren, K.A. Haggerty, H.Y. Kim, A.G. Ky, J.E. Markham, C.F. Meeks, and D.E. Noga American Physical Society 2002 Meeting, Indianapolis, Indiana, March 18-22, 2002.	2
2002	177. THERMAL BEHAVIOR OF POLARIZED Pd/D ELECTRODES PREPARED BY CO-DEPOSITION S. Szpak, P.A. Mosier-Boss, M.H. Miles and M. Fleischmann Ninth International Conference on Cold Fusion, Abstracts, Beijing, China, May 19-24, 2002, pp. 77-78.	2
2002	178. CALORIMETRIC ANALYSIS OF A HEAVY WATER ELECTROLYSIS EXPERIMENT USING Pd-B ALLOY CATHODE M.H. Miles, M.A. Imam, and M. Fleischmann In "Batteries and Supercapacitors", G. Abba-Nazi, E. Takeuchi, R. Koetz, and B. Scrosati, Editors, The Electrochemical Society, Proceedings Volume 2001-21, 2002, pp. 795-806.	2
2002	179. FLUIDIZED BED EXPERIMENTS USING PLATINUM AND PALLADIUM PARTICLES IN HEAVY WATER M.H. Miles Bulletin of the American Physical Society, Vol. 48, No. 1, Part II, Abstract Z334, p. 1382 (2003).	2
2002	Mosier-Boss, P.A., et al., Thermal and Nuclear Aspects of the Pd/D ₂ O System (1), ed. S. Szpak and P.A. Mosier-Boss. Vol. 1 A Decade of Research at Navy Laboratories. 2002: SPAWAR Systems Center, San Diego, U.S. Navy.	3
2003	FLUIDIZED BED EXPERIMENTS USING PLATINUM AND PALLADIUM PARTICLES IN HEAVY WATER. M.H. Miles, in Bulletin of the American Physical Society, Vol. 48, No. 1, Part II, Abstract Z334, p. 1382 (2003).	1

2003	THE ELEVATION OF BOILING POINTS IN H ₂ O AND D ₂ O ELECTROLYTES. <u>M.H. Miles</u> , H.D. Arman, J.D. Carrick, C.K. Gren, K.A. Haggerty, H.Y. Kim, A.G. Ky, J.E. Markham, C.F. Meeks, and D.E. Noga, in <i>Condensed Matter Nuclear Science, Proceedings of the 9th International Conference on Cold Fusion</i> . Xing Z. Li, Editor, Tsinghua University Press, Beijing, China, 2003, pp. 246-249.	1
2003	THERMAL BEHAVIOR OF POLARIZED Pd/D ELECTRODES PREPARED BY CO-DEPOSITION. <u>M.H. Miles</u> , S. Szpak, P.A. Mosier-Boss, and M. Fleischmann in <i>Condensed Matter Nuclear Science, Proceedings of the 9th International Conference on Cold Fusion</i> . Xing Z. Li, Editor, Tsinghua University Press, Beijing, China, 2003, pp. 250-254.	1
2003	FLUIDIZED BED EXPERIMENTS USING PLATINUM AND PALLADIUM PARTICLES IN HEAVY WATER. <u>M.H. Miles</u> , in <i>ICCF-10, 10th International Conference on Cold Fusion</i> , August 24-29, 2003, Abstract No. M012.	1
2003	CORRELATION OF EXCESS ENTHALPY AND HELIUM-4 PRODUCTION: A REVIEW. <u>M.H. Miles</u> in <i>ICCF-10, 10th International Conference on Cold Fusion</i> , August 24-29, 2003, Abstract No. M015.	1
2003	181. THERMAL BEHAVIOR OF POLARIZED Pd/D ELECTRODES PREPARED BY CO-DEPOSITION M.H. Miles, S. Szpak, P.A. Mosier-Boss, and M. Fleischmann In <i>Condensed Matter Nuclear Science, Proceedings of the 9th International Conference on Cold Fusion</i> . Xing Z. Li, Editor, Tsinghua University Press, Beijing, China, 2003, pp. 250-254.	2
2003	185. A CALORIMETRIC INVESTIGATION OF THE Pd/B SYSTEM M.H. Miles, M.A. Imam, and M. Fleischmann <i>ICCF-10, 10th International Conference on Cold Fusion</i> , August 24-29, 2003, Abstract No. M015.	2
2003	186. THERMAL BEHAVIOR OF POLARIZED Pd/D ELECTRODES PREPARED BY CODEPOSITION S.Szpak, P.A. Mosier-Boss, M.H. Miles and M. Fleischmann <i>Thermochimica Acta</i> , 410, 101 (2004).	2
2003	Fleischmann, M. and M. Miles. The "Instrument Function" of Isoperibolic Calorimeters; Excess Enthalpy Generation due to the Parasitic Reduction of Oxygen. in <i>Tenth International Conference on Cold Fusion</i> . 2003. Cambridge, MA: LENR-CANR.org.	3
2003	Miles, M. Correlation Of Excess Enthalpy And Helium-4 Production: A Review. in <i>Tenth International Conference on Cold Fusion</i> . 2003. Cambridge, MA: LENR-CANR.org.	3
2003	Miles, M. Fluidized Bed Experiments Using Platinum And Palladium Particles In Heavy Water. in <i>Tenth International Conference on Cold Fusion</i> . 2003. Cambridge, MA: LENR-CANR.org.	3
2004	A CALORIMETRIC INVESTIGATION OF THE Pd/B SYSTEM. <u>M.H. Miles</u> , M.A. Imam, and M. Fleischmann in <i>ICCF-10, 10th International Conference on Cold Fusion</i> , August 24-29, 2003, Abstract No. M015.	1
2004	195. CORRELATION OF EXCESS ENTHALPY AND HELIUM-4 PRODUCTION: A REVIEW” M.H. Miles <i>Bulletin of American Physical Society</i> , Montreal, Canada, March 2004, Abstract	2
2004	Miles, M., NEDO Final Report - Electrochemical Calorimetric Studies Of Palladium And Palladium Alloys In Heavy Water. 2004, University of La Verne.	3
2004	Szpak, S., et al., Thermal behavior of polarized Pd/D electrodes prepared by co-deposition. <i>Thermochim. Acta</i> , 2004. 410: p. 101.	3
2005	Miles, M. Simultaneous Excess Power and Anomalous Radiation (PowerPoint slides). in <i>American Physical Society Meeting</i> . 2005. Los Angeles.	3
2006	197. ISOPERIBOLIC CALORIMETRY APPLIED TO THE Pt / D2O BLANK SYSTEM M. Fleischmann and M.H. Miles <i>Bulletin of the American Physical Society</i> , Baltimore, MD, March, 2006, Abstract	2
2006	198. FLUIDIZED BED EXPERIMENTS USING PLATINUM AND PALLADIUM PARTICLES IN HEAVY WATER M.H. Miles in “ <i>Condensed Matter Nuclear Science</i> ”, P.I. Hagelstein and S.R. Chubb, Editors, World Scientific, New Jersey, pp. 23-28, 2006	2
2006	199. CORRELATION OF EXCESS ENTHALPY AND HELIUM-4 PRODUCTION: A REVIEW M.H. Miles in “ <i>Condensed Matter Nuclear Science</i> ”, P.I. Hagelstein and S.R. Chubb, Editors, World Scientific, New Jersey, pp. 123-131, 2006	2

2006	200. THE INSTRUMENT FUNCTION OF ISOPERIBOLIC CALORIMETERS: EXCESS ENERGY GENERATION DUE TO THE PARASITIC REDUCTION OF OXYGEN in M. Fleischmann and M.H. Miles in "Condensed Matter Nuclear Science", P.I. Hagelstein and S.R. Chubb, Editors, World Scientific, New Jersey, pp. 247-268, 2006	2
2007	Miles, M. and M. Fleischmann. Precision and Accuracy of Cold Fusion Calorimetry (paper and PowerPoint slides). in 233rd ACS National Meeting, 2007. Chicago, IL.	3
2008	ACCURACY OF ISOPERIBOLIC CALORIMETRY USED IN A COLD FUSION CONTROL EXPERIMENT. M.H. Miles and M. Fleischmann in <i>Low-Energy Nuclear Reaction Sourcebook</i> , ACS Symposium Series 998, J. Marwan and S.B. Krivit, Editors, American Chemical Society, Washington, DC., pp. 153-171, 2008.	1
2008	INVESTIGATIONS OF NANOPARTICLE PALLADIUM/DEUTERIUM SYSTEMS. Parchamazad, M. Miles and J. Alston, in <i>ICCF-14 Conference</i> , Washington DC, 10-15 August, 2008, Abstract 13 and Presentation.	1
2008	Miles, M. and M. Fleischmann, Accuracy of Isoperibolic Calorimetry Used in a Cold Fusion Control Experiment, in <i>Low-Energy Nuclear Reactions Sourcebook</i> . 2008, American Chemical Society: Washington, DC. p. 153-171.	3
2008	Miles, M. and M. Fleischmann. Isoperibolic Calorimetric Measurements of the Fleischmann-Pons Effect. in <i>ICCF-14 International Conference on Condensed Matter Nuclear Science</i> . 2008. Washington, DC.	3
2008	Miles, M. and M. Fleischmann. Twenty Year Review of Isoperibolic Calorimetric Measurements of the Fleischmann-Pons Effect. in <i>ICCF-14 International Conference on Condensed Matter Nuclear Science</i> . 2008. Washington, DC.	3
2008	Szpak, S., et al. LENR Research Using Co-Deposition. in <i>ICCF-14 International Conference on Condensed Matter Nuclear Science</i> . 2008. Washington, DC.	3
2009	Miles, M. Investigations of co-deposition systems. in <i>15th International Conference on Condensed Matter Nuclear Science</i> . 2009. Rome, Italy: ENEA.	3
2009	Miles, M. and M. Fleischmann. New approaches to isoperibolic calorimetry. in <i>15th International Conference on Condensed Matter Nuclear Science</i> . 2009. Rome, Italy: ENEA.	3
2009	Miles, M. and M. Fleischmann. New approaches to isoperibolic calorimetry (PowerPoint slides). in <i>15th International Conference on Condensed Matter Nuclear Science</i> . 2009. Rome, Italy: ENEA.	3
2010	A NEW LOOK AT LOW-ENERGY NUCLEAR REACTION (LENR) RESEARCH: A RESPONSE TO SHANAHAN. J. Marwan, M.C.H. McKubre, F.L. Tanzella, P.L. Hagelstein, M.H. Miles, M.R. Swartz, E. Storms, Y. Iwamura, P.A. Mosier-Boss and L.P.G. Forsley, <i>J. Environ. Monitoring</i> , Vol. 12.9 (2010), pp. 1756-1776.	1
2011	INVESTGATIONS OF POSSIBLE SHUTTLE REACTIONS. M.H. Miles in <i>ICCF-16 Proceedings</i> , M. Srinivasan and J.P. Biberian, Editors, February 6-11, 2011, pp. 92-102.	1
2011	NEW ANALYSIS OF MIT CALORIMETRIC ERRORS. M.H. Miles and P.H. Hagelstein in <i>ICCF-16 Proceedings</i> , M. Srinivasan and J.P. Biberian, Editors, February 6-11, 2011, pp. 103-109.	1
2011	Miles, M. and M. Fleischmann, Measurements of Excess Power Effects In Pd/D ₂ O Systems Using a New Isoperibolic Calorimeter. <i>J. Condensed Matter Nucl. Sci.</i> , 2011. 4: p. 45-55.	3
2011	Mosier-Boss, P.A., et al., Review of Twenty Years of LENR Research Using Pd/D Co-deposition. <i>J. Condensed Matter Nucl. Sci.</i> , 2011. 4: p. 173-187.	3
2012	CO-DEPOSITION OF PALLADIUM AND OTHER TRANSITION METALS IN H ₂ O AND D ₂ O. M.H. Miles in <i>ICCF-17 Proceedings</i> , August 12-17, 2012 (in press as JCMNS publication).	1
2012	EXAMPLES OF ISOPERIBOLIC CALORIMETRY IN THE COLD FUSION CONTROVERSY. M.H. Miles in <i>ICCF-17 Proceedings</i> , August 12-17, 2012 (in press as JCMNS publication).	1
2012	Fleischmann, M., et al., Experimental Evidence of Nuclear Reactions Generated in a Polarized Pd/D Lattice. 2012, LENR-CANR.org .	3
2012	Fleischmann, M. and M. Miles, Thermal Behavior of the Polarized Pd/D ₂ O System. 2012, LENR-CANR.org .	3
2012	Miles, M., Investigations of Possible Shuttle Reactions in Co-deposition Systems. <i>J. Condensed Matter Nucl. Sci.</i> , 2012. 8.	3

2012	Miles, M. and P.L. Hagelstein, New analysis of MIT Calorimetric Errors. <i>J. Condensed Matter Nucl. Sci.</i> , 2012. 8.	3
2014	COLD FUSION AFTER A QUARTER-CENTURY: THE PD/D SYSTEM . M.H. Miles and M.C. H. McKubre in <i>Development in Electrochemistry: Science Inspired by Martin Fleischmann</i> , D. Pletcher, Z.Q. Tian, and D. Williams, Editors, John Wiley, London, pp. 245-260, August 2014.	1
2014	Biberian, J.P., I. Parchamazad, and M. Miles, Possible Role of Oxides in the Fleischmann-Pons Effect. <i>J. Condensed Matter Nucl. Sci.</i> , 2014. 13.	3
2014	Miles, M., Co-Deposition of Palladium and other Transition Metals in H ₂ O and D ₂ O Solutions. <i>J. Condensed Matter Nucl. Sci.</i> , 2014. 13.	3
2014	Miles, M., Examples of Isoperibolic Calorimetry in the Cold Fusion Controversy. <i>J. Condensed Matter Nucl. Sci.</i> , 2014. 13.	3
2015	Miles, M., Thermodynamic and Kinetic Observations Concerning the D + D Fusion Reaction for the Pd/D System. <i>J. Condensed Matter Nucl. Sci.</i> , 2015. 16.	3
2015	Mosier-Boss, P.A., et al., Condensed matter nuclear reaction products observed in Pd/D co-deposition experiments. <i>Curr. Sci.</i> , 2015. 108(4).	3
2016	Miles, M. and R. Cantwell, Data from Melvin Miles' July 2016 experiment. 2016.	3
2016	Miles, M., Excerpts from Martin Fleischmann Letters. <i>J. Condensed Matter Nucl. Sci.</i> , 2016. 19.	3
2016	Miles, M., Introduction To "A Summary of NRL Research on Anomalous Effects in Deuterated Palladium Electrochemical Systems" (published in 1996). 2016.	3
2016	Miles, M. The Fleischmann-Pons Calorimetric Methods And Equations (PowerPoint slides). in Satellite Symposium of the 20th International Conference on Condensed Matter Nuclear Science. 2016. Xiamen, China.	3
2017	Miles, M., The Fleischmann-Pons Calorimetric Methods, Equations and New Applications. <i>J. Condensed Matter Nucl. Sci.</i> , 2017. 24: p. 1-14.	3
2018	Fleischmann, M. and M. Miles, Critique of N.H.E. Paper by Saito et al. 2018, LENR-CANR.org.	3
2018	Fleischmann, M. and M. Miles, Letters from Martin Fleischmann to Melvin Miles. 2018, LENR-CANR.org.	3
2018	Miles, M. Excess power measurements for palladium-boron cathodes (PowerPoint slides). in The 21st International Conference for Condensed Matter Nuclear Science ICCF-21. 2018. Fort Collins, CO.	3



Figure 3-1

Dr. Miles' HP Laptop Computers in His Office.

The Retired HP Pavilion Laptop Is Open and Resting on Top of the Closed Current HP Laptop.











































 How to Power Suite.docx	Aug 30, 2009 at 9:11 AM
 ICCF 10 CORRELATION OF EXCESS ENTHALPY AND HELIUM.docx	Mar 25, 2013 at 3:29 PM
 ICCF 14 7 pg Isoper Cal Meas.doc	Mar 3, 2009 at 10:36 AM
 ICCF 14 Abstract Isoperibolic Calorimetric Measurements.doc	Jun 5, 2008 at 6:02 PM
 ICCF 14 Abstract Isoperibolic Calorimetric Measurements.docx	Jun 4, 2008 at 11:53 AM
 ICCF 14 Abstract REVIEW OF FLEISCHMANN Pd-B.doc	Jun 5, 2008 at 2:46 PM
 ICCF 14 Abstract ULV 052608.doc	Jun 6, 2008 at 10:29 AM
 ICCF 14 Abstract ULV 052608.docx	Jun 5, 2008 at 12:48 PM
 ICCF 14 CF ISOP CALOR OF FP.pptx	Aug 5, 2008 at 9:37 PM
 ICCF 14 CF Pd-B.pptx	Aug 5, 2008 at 1:19 PM
 ICCF 14 Jed MilesMisoperibol Cor 100308.doc	Oct 4, 2008 at 1:15 PM
 ICCF 14 Jed MilesMisoperibol wo fig.doc	Jul 13, 2008 at 4:54 PM
 ICCF 14 MilesMisoperibol Final.pdf	Jul 7, 2008 at 7:13 PM
 ICCF 14 MilesMisoperibol Word 2007.doc	Sep 21, 2008 at 11:29 AM
 ICCF 15 57201 Request For Public Release.pdf	Aug 25, 2009 at 12:51 PM
 ICCF 15 082209.xlsx	Sep 25, 2009 at 11:31 AM
 ICCF 15 Abstract Inv of Codep systems.doc	Jun 2, 2009 at 2:32 PM
 ICCF 15 Abstract Inv of Codep systems.pdf	Jun 2, 2009 at 2:45 PM
 ICCF 15 Abstract NEW APPROACHES TO ISOPERIBOLIC CALORIMETRY.doc	Jun 22, 2009 at 2:07 PM
 ICCF 15 Abstract NEW APPROACHES TO ISOPERIBOLIC CALORIMETRY.pdf	Jun 22, 2009 at 2:29 PM
 ICCF 15 Calorimetry 060609.xlsx	Jun 30, 2009 at 3:28 PM
 ICCF 15 Charts July 2 Data 2009.xlsx	Aug 18, 2009 at 1:11 PM
 ICCF 15 co dep Graphs.ppt	Aug 30, 2009 at 10:42 AM
 ICCF 15 Co-dep.ppt	Sep 11, 2009 at 2:59 PM
 ICCF 15 codep paper 010610.doc	May 9, 2015 at 9:26 PM
 ICCF 15 codep paper 010610.pdf	Jan 2, 2010 at 7:55 PM
 ICCF 15 codep paper.doc	Jan 2, 2010 at 9:39 AM
 ICCF 15 draft.doc	Aug 13, 2009 at 12:35 PM
 ICCF 15 ENEA 2009 long.doc	Dec 6, 2009 at 11:27 AM
 ICCF 15 New Approachs (Calori).pdf	Sep 29, 2009 at 12:17 PM
 ICCF 15 New Approachs (Calori).ppt	Sep 27, 2009 at 5:46 PM
 ICCF 15 New Approachs present.ppt	Sep 27, 2009 at 5:46 PM
 ICCF 15 New Approachs present2.ppt	Sep 27, 2009 at 5:46 PM
 ICCF 15 Power Pt slide 13.doc	Aug 27, 2009 at 8:46 AM
 ICCF 15 Powerpt Slide No12.doc	Aug 27, 2009 at 8:42 AM
 ICCF 15 publications short.doc	Jan 2, 2010 at 8:14 PM
 ICCF 15 publications short.pdf	Jan 2, 2010 at 8:14 PM
 ICCF 15_co dep Graphs.ppt	Aug 30, 2009 at 9:42 AM
 ICCF 16 Abst Ruthenium.docx	Oct 15, 2010 at 11:27 AM
 ICCF 16 abstract Imam PdB.docx	Oct 15, 2010 at 11:24 AM
 ICCF 16 abstract Invest shuttle.docx	Oct 15, 2010 at 10:37 AM
 ICCF 16 Abstract MIT Calor Errors.docx	Oct 30, 2010 at 3:50 PM

Figure 3-2

Screenshot of Files Prepared for ICCF-10, -14, -15, and -16

3.2 Files on CDs

The approximately 58 CDs (Figure 3-3) in Dr. Miles' collection been reviewed, and selected files have been added to the Project¹³. Many of the CDs (about 40%) contain backup and other files that are a significant addition to the MLRDP. The CD contents are listed by year in Table 3-1 with the copied CDs (those having relevant files for the MLRDP) listed first. These have been copied to the Project Dropbox folder, as indicated in the third column of Table 3-1.



Figure 3-3

Dr. Miles' CD Collection. About 40% Contain LENR-Related Files.

¹³ Inventory of Electronic Files on CDs. Memo to Melvin Miles from Tom Grimshaw. June 9, 2019.

Table 3-1
Tabulation of Information on Dr. Miles' CDs

No	Year	Copied	Disk Label	Disk Name	Description
11	1996	Y	Miles graphs		50 files. "Anomalous Effect in Deuterated Systems". 1996.
32	1997	Y	NHE (Japan) Data. Mel Miles. 1997-1998. Wilford N & Vada Hansen.	NHE data	57 Items. All .txt files.
8	1998	Y	Proceedings of the 33rd Intersociety Energy Conversion Engineering Conference. August 2-6, 1998. Colorado Springs, CO.	Iecec98	Copies of Papers, Etc.
15	1998	Y	Disk 1 Vol 2 D. APS. 3/7/03. Austin, TX.	B'sCLiP_CD	626+ Files. 1998-2004. Large Variety of Files.
19	1998	Y	Excel. My Pictures. Word Stuff Linda.	B'sCLiP_CD	210 Items. Large Variety of Files. 1998/2002.
20	1998	Y	Mel's Data. 4/23/04. Less NHE. Mel Miles. A-H. MTSU.	VOL_200411231137	484 Items. 1998-2002. MELMILES. MelmilesAthruH. Mtsu TN.
22	1998	Y	Excel. My documents. 3/29/04. 9/8/04. 11/23/04.	VOL_200410290729	298 Files. 1992. 1998-2002. Mel 03 04. ULV 03 04.
7	2001	Y	Melvin Miles #3584. 25 Slides.	35mm Balti	Baltimore IEEE GaAS meeting viewgraphs.ppt
24	2002	Y	B/U. R/C Files.	020802_1040	45 items. 2002.
29	2002	Y	BEIJING MAY 2002 – DAVID J. NAGEL. To the Miles from Nagel.	020809_1502	942 files. Apparently photographs taken by Nagel
21	2003	Y	B/U. Disk 1_Volume 2 (D). 4/30/04. 10/29/04.	VOL_200410290804	119 Files. 2003-2004. MELMILES. Mtsu TN.
23	2003	Y	Mel. 0304. 11/23/04. UNLV. 0304.	VOL_200411231132	166 items. 2003-2004
10	2004	Y	Mel Miles. A thru H. 10/28/04.	VOL_200410281749	Folder: MELMILES. 266 Files. Combined Professional and Personal Files.
14	2004	Y	B/U #2. Mel's Data "A". 3/29/04. 9/8/04.	B'sCLiP_CD	531 files. MELMILES. Mtsu_TN. NHE_Data.
18	2004	Y	B/U. 12/7/04.	VOL_200412061513	10 files. Includes NHE NEDO Final Report.
26	2004	Y	"E" – NHE. 10/29/04	VOL_200410290752	342 Items. Three Folders: MELVIN MILES, Mtsu_TN, NHE_Data
33	2004	Y	NHE Report	VOL_200406191217	One File: NHE FINAL REPORT (all).doc
16	2005	Y	2004-05. Documents. 2/8/05. Juno. B/U	FEB08 2005	32 Files.
30	2007	Y	Mel Presentation 07. ULV Seminar. 3/07.	Feb 12 2007	One File. "ULV Seminar 021307.ppt"
31	2007	Y	ICCF-14. Mel Miles	Aug 2007	Three Files. Apparent ICCF-14 Files.
13	2008	Y	Burnt Hard Drive Memory	NEW	190 files. Mels data.
1	2016	Y	Photos/China and Japan. 2016.	Oct 14 2016	Single Photo. China and Japan...
2	2016	Y	ICCF-20 Pictures	Oct 14 2016	118 Photo Files. China and Japan 2016 ICCF 20.
3	2016	Y	ICCF-16. RU.	Jun 29 2011	1 File. ICCF 16 RUTHENIUM Co-dep 062111.docx

9	Unk	N	Ridgenet	B'sCLiP_CD	Apparent Ridgenet Backup Files. Not copied.
34	N/A	N	#1 of 13. Recovery Disk. HP Laptop.	113	No Relevant Files. Disk Not Copied.
35	N/A	N	#2 of 13. Recovery Disk.	213	No Relevant Files. Disk Not Copied.
35	N/A	N	#3 of 13.	313	No Relevant Files. Disk Not Copied.
36	N/A	N	#4 of 13.	413	No Relevant Files. Disk Not Copied.
35	N/A	N	#5 of 13.	513	No Relevant Files. Disk Not Copied.
36	N/A	N	#6 of 13.	613	No Relevant Files. Disk Not Copied.
37	N/A	N	#7 of 13.	713	No Relevant Files. Disk Not Copied.
38	N/A	N	#8 of 13.	813	No Relevant Files. Disk Not Copied.
39	N/A	N	#9 of 13.	913	No Relevant Files. Disk Not Copied.
40	N/A	N	#10 of 13.	1013	No Relevant Files. Disk Not Copied.
41	N/A	N	#11 of 13.	1113	No Relevant Files. Disk Not Copied.
42	N/A	N	#12 of 13.	1213	No Relevant Files. Disk Not Copied.
43	N/A	N	#13 of 13.	1313	No Relevant Files. Disk Not Copied.
44	N/A	N	American Greetings. Create a Card Plus.	N/A	Not Relevant to Project. No Files Copied.
45	N/A	N	Mosby's Medical Encyclopedia	N/A	Not Relevant to Project. No Files Copied.
46	N/A	N	Microsoft. Picture It!	N/A	Not Relevant to Project. No Files Copied.
47	N/A	N	Hewlett Packard. Photo Project CD.	N/A	Not Relevant to Project. No Files Copied.
48	N/A	N	Screen Saver. Pictures. Cabin.	N/A	Not Relevant to Project. No Files Copied.
49	N/A	N	QuickBooks Pro.	N/A	Not Relevant to Project. No Files Copied.
50	N/A	N	Comp USA. 56K PCI Internal Data/Fax Modem, V.92	N/A	Not Relevant to Project. No Files Copied.
51	N/A	N	Sound Blaster 16 Software.	N/A	Not Relevant to Project. No Files Copied.
52	N/A	N	Cabin Screen Saver.	N/A	Not Relevant to Project. No Files Copied.
28	1999	N	35th ACS Western Regional Meeting. 1999 Pacific Conference Chemistry and Spectroscopy. October 6-8, 1999.	unknown	[Won't Read]
27	2002	N	Radio West. Airdate 11-27-02. Cold Fusion. Guest: Dr. Michael McKubre, Charles Beaudette	Audio CD	1 Audio Track.aiff to 4 Audio Track.aiff

4	2003	N	APS 3/07/03 Meeting. Ben's lab Etc.	B'sCLIP_CD	No Files on Disk.
5	2003	N	APS Meeting. 3/7/03. +Ben's Lab. University of Texas.	B'sCLIP_CD	No Files on Desk.
6	2003	N	APS. 3/7/03. DVD. Duplicate.	DVD_VIDEO_REC...	VIDEO_TS Folder.
53	2003	N	Programs. CD. 03. 4/26/03	prgcd03	Program Files. Not Relevant. No Files Copied.
12	2004	N	Program. 6/23/04.	VOL_200411231426	Miscellaneous software programs. Not Copied.
17	2004	N	[No Label].	VOL_200412071454.	Two Software Files. Not Copied.
54	2005	N	Recovery. #1 of 5	Recovery15	No Readable Files. No Files Copied
55	2005	N	Recovery. #2 of 5	Recovery25	No Readable Files. No Files Copied
56	2005	N	Recovery. #3 of 5	Recovery35	No Readable Files. No Files Copied
57	2005	N	Recovery. #4 of 5	Recovery45	No Readable Files. No Files Copied
58	2005	N	Recovery. #5 of 5	Recovery55	No Readable Files. No Files Copied
25	2103	N	Old Laptop. Juno.	Aug 25 2013	One File. Juno.lnk. Not Copied.

4 **Hardcopy Records: Notebooks**

Dr. Miles' hardcopy records obtained in the MLRDP consist of three sets of bound notebooks¹⁴. Two of them are lab notebooks for his LENR experimental work at NAWC and at New Hydrogen Energy (NHE) in Japan. The third set consists of log notebooks with notes from phone calls, meetings, and related events. No other hardcopy records were located for the Project.

4.1 **Lab Notebooks, Naval Air Weapons Center, China Lake**

Dr. Miles' lab notebooks for his LENR work at the NAWC consist of 10 bound volumes¹⁵ (Figure 4-1). Entries for his LENR experiments begin in Notebook #18. These entries continue through Notebook #25 (June 1995) as shown below.

#	Dates	Notes
18	5/14/87 to 5/3/89	CF Starts on Page 153. 3/25/89.
19	5/2/89 to 9/26/89	
20	6/26/89 to 10/4/91	Some by Postdocs
21	10/8/90 to 8/20/91	Mostly CF
BB*	4/11/91 to 12/28/93	Notes of Experimental Setups. Not Data.
22	8/25/91 to 8/11/92	
23	8/11/92 to 2/18/94	
24	6/29/92 to 8/6/94	Started by Ben Bush. Last Entry by Bush 3/10/93. Entries by Mel Miles, 7/11/92 to 8/6/94
25	2/18/94 to 8/25/97	End of CF in June 1995
26	2/27/94 to 8/27/95	

The most relevant pages of Notebook 18 have been scanned¹⁶. The first LENR entry in this notebook was on March 25, 1989 (page 153), just two days after the March 23 announcement by Fleischmann and Pons. The first page and page 153 of the notebook are shown in Figures 4-2 and 4-3. Notebooks

¹⁴ At least two additional sets of notebooks, one that was created when he was a contractor for NAWC and the other recording his recent LENR activities, also exist in Dr. Miles records. They may be added to the Project in the future.

¹⁵ Cold Fusion Entries in Lab Notebooks from Naval Air Warfare Station. Memo to Melvin Miles from Tom Grimshaw. June 3, 2019.

¹⁶ Cold Fusion Entries in Lab Notebooks from Naval Air Warfare Station (Memo 2). Memo to Mel Miles from Tom Grimshaw. August 16, 2019.

19 and 20¹⁷ (and the most relevant pages of Notebook 21¹⁸) have also been photocopied and scanned for the Project.



*Figure 4-1
Lab Notebooks from Naval Air Warfare Station
Photo Taken March 2019*

¹⁷ Example Cold Fusion Entries in Naval Air Warfare Station Lab Notebook # 20. Memo to Mel Miles from Tom Grimshaw. August 26, 2019.

¹⁸ Partial Contents of Naval Air Warfare Station Lab Notebook #21. Title. Memo to Mel Miles from Tom Grimshaw. August 27, 2019.

Notebook #18

Dr. Melvin H. Miles
 807 Marnie Avenue
 Ridgcrest, CA. 93555
 May 18, 1987

May 14, 1987 → May 3, 1989

FY-88 JO # 1380508 ARM - Light Attenuation
 JO # 1385238 GMM - Interhalogen Solvents
 FY-89 JO # 1380509 ARM - Light Attenuation
 JO # 1385239 GMM - Interhalogen Solvents

ROC/RIC Lithium 99.95%



John Frame
 JO # 1321949 DSP - Fusion

COLUMNAR BOOK 10³/₁₆ IN. x 8¹/₄ IN.

150 PAGES	300 PAGES	RULING	WIDTH OF DESC. COL.	UNITS PER COLUMN
STOCK NUMBER	STOCK NUMBER	X → 5980		
SINGLE PAGE FORM				
No. 21-150-2	21-300-2	2 Columns	3%	10,000,000
No. 21-150-3	21-300-3	3 Columns	3%	1,000,000
No. 21-150-4	21-300-4	4 Columns	2%	1,000,000
No. 21-150-5	21-300-5	5 Columns	1%	100,000
No. 21-150-6	21-300-6	6 Columns	1%	10,000
No. 21-150-6	21-300-6	6 Columns Divided	2	10,000
No. 21-150-7	21-300-7	7 Columns	1%	10,000
No. 21-150-SEL	21-300-SEL	S.E. Ledger	3%	10,000,000
No. 21-150-DEL	21-300-DEL	D.E. Ledger	1%	1,000,000
No. 21-150-Q	21-300-Q	Quad.-5 sps. to inch	—	—
No. 21-150-R	21-300-R	Record w/Margin	—	—
No. 21-150-RIT	21-300-RIT	Record Indexed	—	—
No. 21-150-C&L	21-300-RIT	1/3 Cash / 2/3 DEL	3% / 1%	1,000,000/—
DOUBLE PAGE FORM				
No. 21-150-8	21-300-8	8 Columns	3%	10,000,000
No. 21-150-10	21-300-10	10 Columns	4%	1,000,000
No. 21-150-12	21-300-12	12 Columns	2%	1,000,000

BOORUM & PEASE CO. Elizabeth, NJ 07208 U.S.A.

MADE IN U.S.A.

Figure 4-2
 First Page of NAWC Lab Notebook #18

153

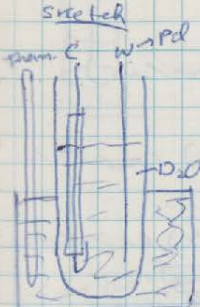
Saturday
March 25, 1989 / ${}^2_1\text{D} + {}^2_1\text{D} \rightarrow {}^3_1\text{H} + {}^3_2\text{He}$

Electrochemical Fusion Test

First Experiment at NWC. Two days after Pms/Fleishman announcement.

Objective: To test report of electrochemical fusion using a Palladium Electrode and Deuterium Oxide

Method: Used a crude test-tube set-up with a Palladium wire working electrode and a Pt-Rh counter electrode. No reference electrode was used. Prepared D_2O solution using 99.9% D_2O (Cambridge Isotope Laboratories). Weighed out 0.525 g NaF and added 27.6 g D_2O to give 0.5M NaF solution (0.45 m). Added 5 g of this solution to test tube cell and inserted Pd and Pt-Rh wires. Pt-Rh was insulated with Teflon tubing to prevent shorting. Placed test-tube cell into small beaker of water with thermometer in order to measure heat produced by electrochemical or fusion process. NaF \rightarrow MCB powder, reagent. Connected Ref. lead to counter electrode.



Results - Constant Current Studies (PAR 173 P/G) with 179 coulometer

I - $I = 5 \text{ mA}$, $t = 356 \text{ s}$ } $T_{\text{initial}} = 22.0^\circ\text{C}$, $T_{\text{final}} = 22.0^\circ\text{C}$ } $\Delta T = 0$
 $E = 3.1 - 3.2 \text{ V}$
 O_2 -evolution visible but no D_2 -evolution \Rightarrow charging Pd electrode with D to form Pd-D.

II - $I = 50 \text{ mA}$, $t = 352 \text{ s}$ } $T_{\text{initial}} = 22.0^\circ\text{C}$, $T_{\text{final}} = 22.7^\circ\text{C}$ } $\Delta T = 0.5^\circ\text{C}$
 $E = 5.3 - 5.5 \text{ V}$
 Gas-Evolution visible at both electrodes

III - $I = 100 \text{ mA}$, $t = 358.7 \text{ s}$, $Q = 35.87 \text{ C}$ } $T_{\text{initial}} = 22.3^\circ\text{C}$, $T_{\text{final}} = 24.8^\circ\text{C}$ } $\Delta T = 2.5^\circ\text{C}$
 Vigorous Gas Evolution at Both Electrodes
 $E = 7.1 - 7.5 \text{ V}$

IV - $I = 100 \text{ mA}$, $t = 370.5 \text{ s}$, $Q = 37.05 \text{ C}$ } $T_{\text{initial}} = 22.8^\circ\text{C}$, $T_{\text{final}} = 25.0^\circ\text{C}$ } $\Delta T = 2.2^\circ\text{C}$
 Vigorous Gas Evolution at Both Electrodes
 $E = 7.0 - 7.6 \text{ V}$

Note: Gassing observed at Pd electrode after equip. turned off and electrode disconnected. 3/27 } No pH change, pH ~ 6 \Rightarrow No Li^+ formed. There would be no pH change even if Li was formed

Figure 4-3.
Page 153 of NAWC Lab Notebook #18: First LENR Experiment

4.2 Lab Notebooks, New Hydrogen Energy, Japan

Dr. Miles conducted LENR research at the New Hydrogen Laboratory in Sapporo, Japan from about October 1997 to April 1998. The results of the research were carefully documented in four bound notebooks¹⁹. A photo of the notebooks is in Figure 4-4. They are listed below with descriptions. Notebook 1 has been photocopied for the MLRDP²⁰.

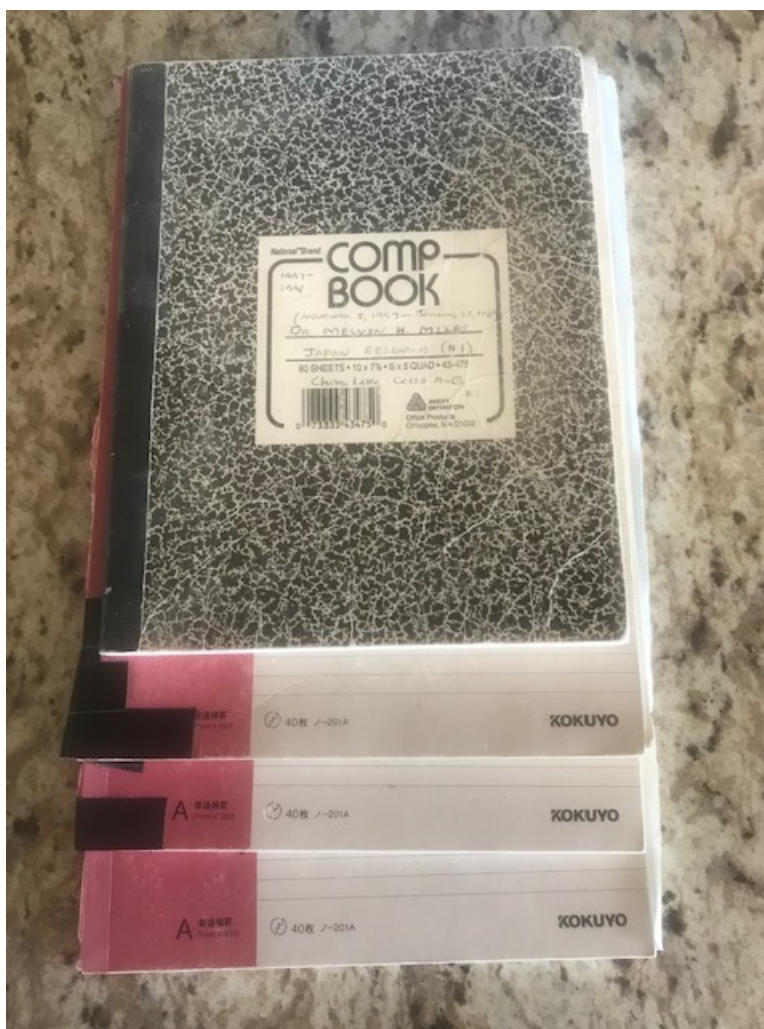
- | | | |
|---|------------------------|--|
| 1 | 11/5/1997 to 1/23/1998 | Japan Research (#1). China Lake Cells A & B. |
| 2 | 12/1/1997 to 3/9/1998 | NHE Research (#2). F/P Cells. |
| 3 | 1/21/1998 to 2/24/1998 | NHE Research (#3). Cells A and B. |
| 4 | 2/24/1998 to 3/20/1998 | NHE Research (#4). Cells A and B. F/P Cells (Continuation). Data Analysis. |

4.3 Activities and Events Notebooks

Dr. Miles maintained careful notes of his professional activities and events in a series of bound notebooks. They were begun in late 1986 and continue to the present. A photo of the 24 notebooks is in Figure 4-5. The date ranges of the notebooks are shown in Table 4-1 along with notes of their contents. The first LENR entry (Notebook 1) was two days after the March 23 announcement by Fleischman and Pons. A revised numbering system was started with Notebook #18 as shown in the table.

¹⁹ Lab Notebooks from Miles' LENR Research at New Hydrogen Energy, Japan. Memo to Melvin Miles from Tom Grimshaw. July 9, 2019.

²⁰ Photocopy of NHE Lab Notebook #1. Memo to Melvin Miles from Tom Grimshaw. August 29, 2019.



*Figure 4-4.
Lab Notebooks from New Hydrogen Energy
Photo Taken May 2019*



Figure 4-5

Notebooks with Notes from Dr. Miles' Meetings, Phone Calls, Etc.

Table 4-1.

Date Ranges of Dr. Miles' Notebooks for Meetings, Phone Calls, Etc.

No	Date Range	Notes
1	12/18/86 to 6/1/89	3/24/89. Notes on Fleischmann and Pons announcement.
2	6/27/89 to 12/11/19	
3	12/11/90 to 10/16/92	
4	10/22/92 to 6/1/94	
5	9/23/93 to 2/15/95	
6	2/15/95 to 11/8/96	
7	1/16/97 to 10/9/98	
8	10/14/98 to 9/24/99	
8A	2/23/99 to 7/29/07	
9	9/11/99 to 4/13/00	
10	4/27/00 to 1/15/04 (2/23/99 to 7/29/07)	Additional notebook covering range of #8A to #11
10A	8/28/01 to 5/15/02	
11	2/3/04 to 3/19/09	3/19/09. Last call to Martin Fleischmann.
11A	8/14/07 to 4/10/09	
12	4/14/09 to 7/13/09	
13	8/27/09 to 1/28/10	
13A	1/28/10 to 9/2/10	
14	9/2/10 to 3/5/11	
15	3/7/11 to 12/7/11	
16	12/30/11 to 2/8/13	
17	2/22/13 to 6/25/14	
18	6/28/14 to 6/2/15	#15 in New Miles System
19	6/3/15 to 8/22/16	#16 in New Miles System
20	8/25/16 to 3/28/17	#17 in New Miles System
21	3/28/17 to 3/27/18	#18 in New Miles System
22	4/3/18 to 5/20/18	#19 in New Miles System
23	5/26/18 to 10/24/18	#20 in New Miles System
24	10/24/18 to Present	#21 in New Miles System

5 *LENR Library*

Dr. Miles' LENR Library consists of conference proceedings, other LENR books, a collection of VHS tapes, photographs, and conference posters. A photo of the bookcase containing the proceedings and other books is in Figure 5-1.

5.1 *ICCF Conference Proceedings*

Dr. Miles has assembled a large collection of LENR conference proceedings²¹. The collection indicates that he participated in the first ICCF conference in 1990 and continued at least through ICCF-11 in 2004 as well as ICCF-14 (2008) and ICCF-16 (2011) as shown below.

1	1990	Salt Lake City, UT
2	1991	Como, Italy
3	1992	Nagoya, Japan
4	1993	Lahaina, Hawaii
5	1995	Monte Carlo, Monaco
6	1996	Hokkaido, Japan
7	1998	Vancouver, BC
8	2000	Lerici (La Spezia), Italy
9	2002	Beijing, China
10	2003	Cambridge, MA
11	2004	Marseille, France
14	2008	Washington, DC
16	2011	Chennai, India

Photos of the ICCF-1 and ICCF-2 proceedings are shown in Figure 5-2 as examples. The ICCF conference proceedings are listed in Table 5-1.

²¹ Inventory of ICCF Conference Materials and Cold Fusion Books. Memo to Melvin Miles from Tom Grimshaw. June 1, 2019.



Figure 5-1

Bookshelf Containing Inventoried Conference Proceedings and Books (Top Shelf)

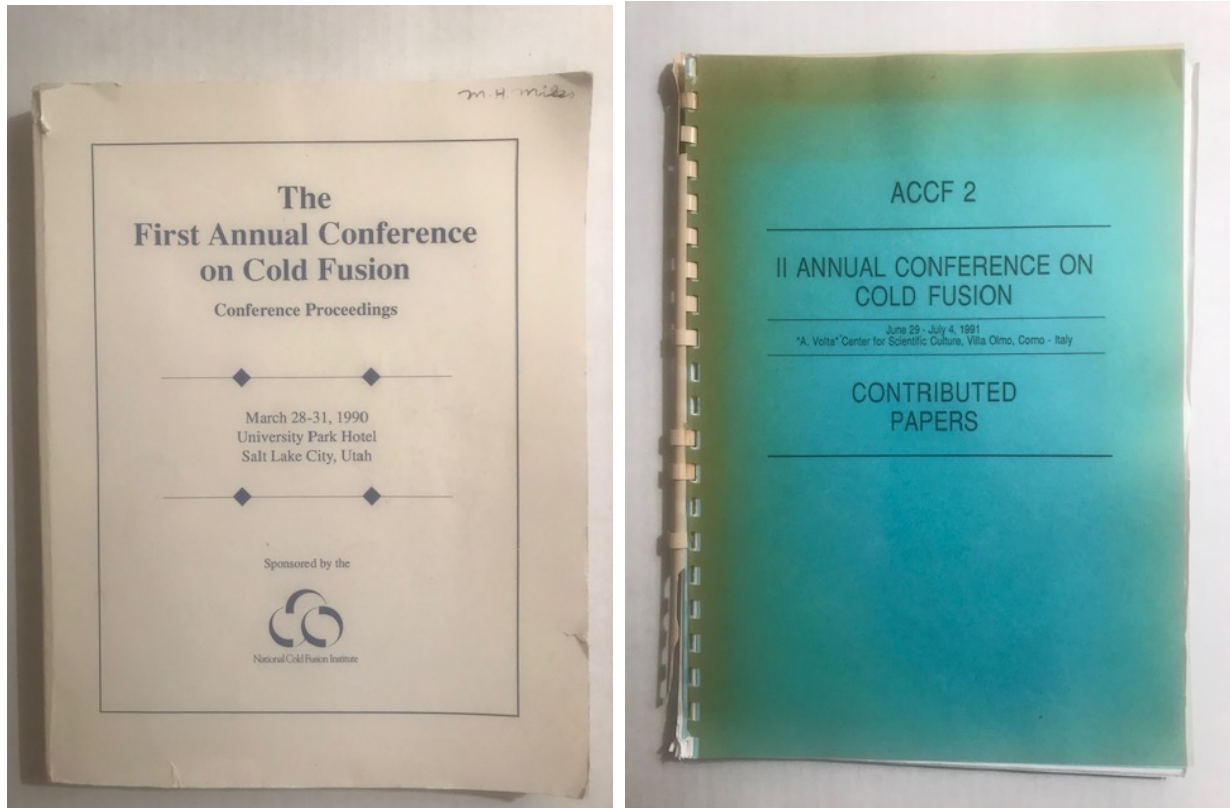


Figure 5-2

Photos of ICCF-1 and ICCF-2 Conference Proceedings

Table 5-1

Inventory of ICCF Conference Proceedings and Related Materials

1990	The First Annual Conference on Cold Fusion. March 28-31, 1990. University Park Hotel. Salt Lake City, Utah. Sponsored by the National Cold Fusion Institute
1990	The First Annual Conference on Cold Fusion. Conference Proceedings. March 28-31, 1990. University Park Hotel. Salt Lake City, Utah. Sponsored by the National Cold Fusion Institute.
1991	ACCF2. II Annual Conference on Cold Fusion. June 29 – July 4, 1991. “A. Volta” Center for Scientific Culture, Villa Olmo, Como – Italy. Contributed Papers.
1991	ACCF2. Proceedings of the II Annual Conference on Cold Fusion. June 29 – July 4, 1991. “A. Volta” Center for Scientific Culture, Villa Olmo, Como – Italy. Tulio Bressani, Emilio Del Giudice, Guliano Preparata, Editors. Societa Italiana di Fisica.
1992	Proceedings of the Third International Conference on Cold Fusion. October 21-25, 1992. Nagoya, Japan. Frontiers of Cold Fusion. Edited by H. Ikegami. National Institute for Fusion Science, Japan. Universal Academy Press, Inc. Tokyo, Japan.
1993	Proceedings: Fourth International Conference on Cold Fusion. Volume 1: Plenary Session Papers. Electric Power Research Institute. EPRI TR-104188-V1. Project 3170. Proceedings. July 1994.
1993	Proceedings: Fourth International Conference on Cold Fusion. Volume 2: Calorimetry and Materials Papers. Electric Power Research Institute. EPRI TR-104188-V2. Project 3170. Proceedings. July 1994.
1993	Proceedings: Fourth International Conference on Cold Fusion. Volume 3: Nuclear Measurements Papers. Electric Power Research Institute. EPRI TR-104188-V3. Project 3170. Proceedings. July 1994.
1993	Proceedings: Fourth International Conference on Cold Fusion. Volume 4: Theory and Special Topics Papers. Electric Power Research Institute. EPRI TR-104188-V4. Project 3170. Proceedings. July 1994.
1993	Fourth International Conference on Cold Fusion. December 6-9, 1993. Lahaina, Maui, Hawaii. Transactions of Fusion Technology. Volume 26, Number 47, Part 2. December 1994.
1995	Proceedings of the 5th International Conference on Cold Fusion. ICCF-5. April 9-13, 1995. Hotel Loews. Monte Carlo, Monaco.
1996	The Sixth International Conference on Cold Fusion. Progress in New Hydrogen Energy. October 13-18, 1996. Japan. New Energy and Industrial Technology Development Organization. The Institute of Applied Energy. Supported by the Agency of Natural Resources and Energy of the Ministry of International Trade and Industry. Proceedings. Edited by Makoto Okamoto. Volume 1.
1996	The Sixth International Conference on Cold Fusion. Progress in New Hydrogen Energy. October 13-18, 1996. Japan. New Energy and Industrial Technology Development Organization. The Institute of Applied Energy. Supported by the Agency of Natural Resources and Energy of the Ministry of International Trade and Industry. Proceedings. Edited by Makoto Okamoto. Volume 2.
1998	The Seventh International Conference on Cold Fusion. ICCF-7. Vancouver. Proceedings. April 19-24, 1988. Vancouver Trade and Convention Center. Vancouver, British Columbia, Canada. Sponsored by ENECO, Inc., Salt Lake City, Utah, USA.
2000	Proceedings of the Eighth International Conference on Cold Fusion. ICCF 8. Edited by F.F. Scaramucci. Lerici (La Spezia), Italy. 21-26 May 2000. Conference Proceedings. Volume 70. Italian Physical Society. Bologna, Italy.
2002	Proceedings of the 9th International Conference on Cold Fusion. Condensed Matter Nuclear Science. Edited by Xing Z. Li. May 19-24, 2002. International Convention Center. Tsinghua University, Beijing, China.
2003	Proceedings of the 10th International Conference on Cold Fusion. Condensed Matter Nuclear Science. Royal Sonesta Hotel. Cambridge, Massachusetts, USA. 24-29 August 2003. Editors: Peter L. Hagelstein and Scott R. Chubb. World Scientific. New Jersey, USA.

2004	Proceedings of the 11th International Conference on Cold Fusion. Condensed Matter Nuclear Science. Marseille, France. 31 October – 5 November 2004. Editor: John-Paul Biberian. World Scientific. New Jersey, USA.
2008	Proceedings of the 14th International Conference on Condensed Matter Nuclear Science and the 14th International Conference on Cold Fusion (ICCF-14). 10-15 August 2008. Washington DC. Exciting New Science. Potential Clean Energy. General Editors: David J. Nagel and Michael C. Melich. Theory Editors: Rodney W. Johnson and Scott R. Chubb. Copy Editor: Jed Rothwell. Volume 1.
2008	Proceedings of the 14th International Conference on Condensed Matter Nuclear Science and the 14th International Conference on Cold Fusion (ICCF-14). 10-15 August 2008. Washington DC. Exciting New Science. Potential Clean Energy. General Editors: David J. Nagel and Michael C. Melich. Theory Editors: Rodney W. Johnson and Scott R. Chubb. Copy Editor: Jed Rothwell. Volume 2.
2011	Proceedings of the 16th International Conference on Condensed Matter Nuclear Science. February 6-11, Chennai, India. Editors: Mahadeva Srinivasan and Jean Paul Biberian. 2011.

5.2 LENR Books

Dr. Miles has also collected many of the LENR books prepared by other researchers and authors. The 17 books found in his collection are listed in Table 5-2.

*Table 5-2
Inventory of Cold Fusion and Related Books*

Title	Author
A Dialogue on Chemically Induced Nuclear Effects	Nate Hoffman
Low Energy Reactions Sourcebook. ACS Symposium Series 998	Jan Marwan and Steven B. Krivit
Fire from Ice	Eugene F. Mallove
The Science of Low Energy Nuclear Reaction	Edmund Storms
Developments in Electrochemistry	Derek Pletcher, Zhong Qun Tian, David E. Williams
Excess Heat	Charles G. Beaudette
The Explanation of Low Energy Nuclear Reaction	Edmund Storms
The Rebirth of Cold Fusion	Steven B. Krivit and Nadine Winocour
QED Coherence in Matter	Giuliano Preparata
Hacking the Atom	Steven B. Krivit
Fusion Fiasco	Steven B. Krivit
The Metal-Hydrogen System	Yuh Fukai
Cold Fusion – The Making of a Scientific Controversy	F. David Peat
Too Hard to Handle – The Race for Cold Fusion	Frank Close
Fusion in All Its Forms	Jean-Paul Biberian
Nuclear Transportation – the Reality of Cold Fusion	Tadahiko Mizuno
Cold Fusion and the Future	Jed Rothwell
Bad Science: The Short Life and Weird Times of Cold Fusion	Gary Taubes
Cold Fusion: Advances in Condensed Matter Nuclear Science	Jean-Paul Biberian

5.3 Video Recordings (VHS Tapes)

Dr. Miles has a collection of about 38 video recordings of LENR-related events²². The VHS tapes, shown in Figure 5-3, include LENR conferences, lectures and presentations by Dr. Miles and others. Many of them were recorded by Linda Miles. After an inventory of the tapes was accomplished, they were reviewed individually with Dr. Miles. They are listed in Table 5-3 with notes made during the review. Using a commercially available software product (Homestech VHS to DVD 9.0 Deluxe), all but four of the tapes have been copied for the MLRDP^{23,24,25,26}. The list of tapes in Table 5-3 has been sorted by year with the tapes not copied included at the end of the list.



Figure 5-3

Dr. Miles' Video Recording (VHS Tape) Collection

²² Inventory of Cold Fusion and Related VHS Tapes. Memo to Melvin Miles from Tom Grimshaw. June 1, 2019.

²³ Cold Fusion and Related VHS Tapes: Digital Copies to Date. Memo to Mel Miles from Tom Grimshaw. August 8, 2019.

²⁴ Cold Fusion and Related VHS Tapes: Additions to Copied Tapes. Memo to Mel Miles from Tom Grimshaw. December 24, 2019.

²⁵ Cold Fusion and Related VHS Tapes: Additions of Tapes from Linda Miles. Memo to Mel Miles from Tom Grimshaw. January 17, 2020.

²⁶ Replacement of 60 Minutes VHS Tape Digital Copy: Copy from SKINR. Memo to Mel Miles from Tom Grimshaw. January 19, 2020.

*Table 5-3.
Inventory of VHS Tapes, with Notes from Review with Miles*

Year	Tape No	Copy?	Description	Notes	Tape
No Date	1	Y	ABC News Patterson Power Cell	Cold Fusion. C/F. 1-82. 378-1177.	Kodak High-Grade Video-tape. T-120.
No Date	2	Y	Dufour.	Jacques Dufour, French scientist. Unknown seminar or presentation.	Maxell. GX-Silver.
No Date	6	Y	CBC Prime Time News. "The Secret Life of Cold Fusion". Reporter: Jerry Thompson. Producer: Robin Christmas. Running Time: 27:55	Canadian Broadcasting Corporation recording.	Plastic Container. 3M. T-30
1991	10	Y	2nd Annual Conference on Cold Fusion. Tape #1. Como, Italy. Nova Resources Group.	Conference videotape sent to attendees. One of the best ICCFs. Large U.S. Navy presence.	Plastic Container with No Label
1991	11	Y	2nd Annual Conference on Cold Fusion. Tape #2. Como, Italy. Nova Resources Group.	Conference videotape sent to attendees. One of the best ICCFs. Large U.S. Navy presence.	Plastic Container with No Label
1991	12	Y	Cold Fusion. Mel Miles. Unclassified. V.P. No. 91-137. Film Video Projects Branch, Naval Weapons Center, China Lake, CA, 93555. 8 Minutes	Professional NAWS tape on cold fusion. Professor Li	Ampex 189. T120
1992	13	Y	Dr. Bush/Physics Lecture. Cal Poly Pomona Instructional Technology Center. May 8.	Robert T. Bush. CF lecture.	3M T120.
1992	14	Y	M. Miles PSU Seminar. C/F. February 20.	Portland State U. John Dash invitation. Also Steve Jones separately.	No Box. VHS.
1992	15	Y	S. Jones. PSU Seminar. C/F.	Associated with #14/#11 above. Prior to Miles presentation.	No Container. Scotch VHS.
1993	16	Y	Cold Fusion. NHK Prime 10 TV Show. Japan. February 3.	NHK television station. In Japanese.	Video Den. T-120 HS.
1994	17	Y	5 Years of Cold Fusion Research in China. Navy China Lake. Video Projects Branch. V.P. 94-114.	Professional NAWS tape on cold fusion. Content unknown.	TDK HS. High Standard
1997	20	Y	PD in Heavy Water by Melvin Miles, PhD. VP 97-236. 16 Men. NAWCPWPNS. Video Projects., Code 474600D. Naval Air Warfare Center.	Professional NAWS tape on cold fusion. "Anomalous Heat and Helium Production Using Palladium Boron Alloys in Heavy Water"	NAWC. No Tape Brand Description.
1999	22	Y	ACS/Ontario. C/F. #1. October 8.	Western Regional Meeting. NAWS organized. CF controversy.	TDK. DSP.
1999	23	Y	ACS/Ontario. C/F. #2 of 4. October 8.	Western Regional Meeting. NAWS organized. CF controversy.	TDK. DSP.
1999	24	Y	ACS/Ontario. Randall Mills. October 6-8. #3 of 4.	Western Regional Meeting. NAWS organized. CF controversy.	TDK
1999	25	Y	ACS/Ontario. C/F. #4 of 4. October 8.	Western Regional Meeting. NAWS organized. CF controversy.	TDK. DSP.
1999	26	Y	ACS/Ontario. Randall Mills. October 6-8. #1 of 2.	Western Regional Meeting. Mills presentation.	TDK
1999	27	Y	ACS/Ontario. C/F. # 2 of 2. October 6.	Western Regional Meeting. Mills presentation.	TDK. DSP.

28	1999	Y	ACS/Ontario. C/F. Texas Justice. October 6-8.	Western Regional Meeting. Unknown content.	Kodak High Grade T-120.
29	1999	Y	Cold Fusion: Fire from Water. Infinite Energy Magazine. "Cold Fusion Technology, Inc."	Tape for sale by Infinite Energy.	VHS
3	2000	Y	ICCF-8. Lerici, Italy. NTSC.	2008. Headed by Scaramuzzi. Private meeting with Fleischmann on the side.	Panasonic. DHS.
30	2000	Y	ICCF-8. Italy. # 1. #2 (Navy). May 23-25.	Private conversation w/ Martin Fleischmann. Weaponization.	Memorex.
31	2000	Y	APS. Minneapolis, Minnesota. C/F. March 20-21.	APS "March Meeting". Arranged by Scott Chubb.	Maxell. GX-Silver. T-120.
32	2000	Y	Washington, DC. November.	Unknown China Lake related meeting. Chaired by George Miley?	Sony. Premium Grade. T-120.
38	2000	Y	"Cold Fusion: Past, Present, Future". An Evening with Martin Fleischmann, Co-Discoverer of Cold Fusion at the U. of Utah in 1989, Reflects upon the Past Decade.	IRI, Integrity Research Institute, Cold Fusion Seminar.	UNKNOWN
33	2002	Y	Cold Fusion Seminar. Mel Miles (& West Coast Swing Dance) February 14.	Miles lecture at Chemistry Department, Middle Tennessee State University. Also, dance by/with Linda Miles.	Maxwell. High Grade. T-120.
34	2002	Y	APS. Indianapolis, Indiana. March 22.	APS "March Meeting". Arranged by Scott Chubb.	RCA. Video Tape. VHS. T-120H.
35	2003.	Y	APS – March 2003. Austin, Texas. March 7. Two hr, 15 min.	APS "March Meeting". Arranged by Scott Chubb. Attended by Ben Bush. Gave a tour of UT Chemistry lab. Lagowski, supervisor.	RCA. Standard Grade. T-120H
36	2005	Y	APS. #11.	APS "March Meeting". Arranged by Scott Chubb. 2000 or 2005? Not #11.	Sony. Premium Grade. T-120.
37	2009	Y	60 Minute Cold Fusion	CBS review with Duncan and McKubre	No Container Sony. VHS.
5	No Date	N	CBC: "Too Close to the Sun"	Canadian Broadcasting Corporation recording.	3M. VHS. T-60.
7	1989-1991	N	St George Race. 1989, 1990, 1991. Cold Fusion – Melvin Miles. C/F.	Three races Mel ran in. Also unknown CF content.	Polaroid. T-120.
8	1989-1991	N	St George Race. 1989, 1990, 1991. Cold Fusion – Melvin Miles. C/F.	Three races Mel ran in. Also unknown CF content.	Kodak. Video Cassette. T-120.
9	1989-1991	N	St George Race. 1989, 1990, 1991. Cold Fusion – Melvin Miles. C/F.	Three races Mel ran in. Also unknown CF content.	Kodak. Video Cassette. T-120.
18	1994	N	ABC Good Morning America. C/F Segment. Mel Miles.	Recorded television program.	RCA Video Tape. T-120
19	1996	N	C/F Night Line (Cold Fusion). February 7. (Last 1/2 of Gulliver's Travels)	Recorded television program. Also, recorded portion of movie.	Kodak. High Grade. T-120
21	1997	N	ABC News. Primetime Live. 6/4/97. Segment One. ABC News Video Collection.	Recorded television program.	VHS
4	2000	N	ICCF-8. Italy. Miles-Fleischmann-McKubre.	Probably individual presentations at the conference.	Sony. Premium Grade. T-120 VL

5.4 Photographs

More than 250 hardcopy photos in Dr. Miles' collection have been added to the Project²⁷. They have been organized into 21 sets (Table 5-4), scanned, and reviewed with Dr. Miles to identify as many of the people, locations, and experiment as possible²⁸. The identifications are included in Appendix B. Three pictures from Sets 2, 5 and 6 have been selected as examples of the photos (Figure 5-4). They are pictures of Dr. Miles in attendance at ICCF conferences in 1992, 1995 and 1996..

Another group of photos that had been loaned to Steve Katinsky for the LENRIA calendar has also been added to the Project²⁹. These pictures are from Dr. Miles' LENR research assignment at NHE laboratory in 1997-98. They consist of three sets as shown below.

- Set 1. 1 Photo. "Japanese NHE Lab Employees"
Some Individuals Identified
- Set 2. 6 Photos.
Groups of Staff Members
Some Individuals Identified
One Picture of the Inside of the Lab
- Set 3. 15 Photos and One Image Describing the Pictures as Follows:
Fleischmann/Pons Cells
NHE Laboratory
Lab Dismantling in March, 1998
Outside NHE Building
Nearby Forest

5.5 Conference Posters

Among Dr. Miles' collection of LENR materials are examples of posters that he has presented at professional conferences³⁰. Several of these examples are located on the walls of the garage of his home. One of them, from ICCF-21 in June 2018, as shown in Figure 5-5: "Calorimetry Insights from Fleischman Letters".

²⁷ Inventory of Photos for the Miles LENR Research Documentation Project. Memo to Mel Miles from Tom Grimshaw. November 5, 2019.

²⁸ LENR-Related Photos – Identifications of Contents and Scanning for Image Files. Memo to Mel Miles from Tom Grimshaw. January 7, 2020.

²⁹ NHE Photos from Steve Katinsky. Memo to Melvin Miles from Tom Grimshaw. January 9, 2020.

³⁰ Posters in Garage. Memo to Melvin Miles from Tom Grimshaw. June 12, 2019.

Table 5-4.

Dr. Miles' Sets of Photographs

No	Year	Mon	Description	Photos
1	1959	13	Photo of Miles	1
2	1992	10	ICCF-3, Nagoya, Japan	16
3	1993	10	Conference in Russia	25
4	1994	8	U.S. Navy Cold Fusion Review Meeting	4
5	1995	4	ICCF-5, Monte Carlo, Monaco	42
6	1996	10	ICCF-6, Lake Toya, Sapporo, Japan	7
7	1997	2	Pirelli Research Program Attempt, Milan, Italy	4
8	1998	1	New Hydrogen Energy Lab, Japan	47
9	1998	4	ICCF-7, Vancouver, BC	11
10	1998	5	Takahashi Visit to Naval Weapons Center (Death Valley Pix)	2
11	1998	9	Paolo Tripodi Visit to Naval Weapons Center (Death Valley Pix)	5
12	1999	10	Asti Meeting, Italy	18
13	1999	10	ACS Meeting, Ontario, CA	1
14	2000	3	APS Meeting? ICCF-8?	5
15	2000	5	ICCF-8, Lerici (La Spezia), Italy	4
16	2000	10	U.S. Navy Meeting, San Diego, CA	4
17	2000	10	Miles Office & Lab, Naval Weapons Center, China Lake, CA	8
18	2000	10	"Before Weapons Meeting", San Diego, CA	9
19	2002	5	ICCF-9, China	25
20	2003	8	ICCF-10, MIT, Cambridge, MA	6
21	2004	11	Earth Tech Test of Miles Cell, Austin, TX	7
			Total	251



*ICCF-3, Nagoya, Japan, 1992.
At Registration Desk.*



*ICCF-5, Monte Carlo, 1995.
Left to Right: Julie and Roger Stringham, John Dash, Michael Melich, Jean-Paul Biberian, Mel Miles.*



*ICCF-6, Lake Toya, Sapporo, Japan, 1996.
With Mahadeva (Chino) Srinivasan.*

*Figure 5-4
Dr. Miles at ICCF Conferences*

6 Interviews

Two interviews have been conducted with Dr. Miles as a key feature of the MLRDP^{31,32}. They were conducted at his home on May 5-6 and July 18-19, 2019. The first interview comprised seven segments, and the second one has nine segments. Both were recorded, and the audio files have been transcribed using an online service (Rev.com). The transcriptions are in Appendix C.

The transcriptions are being reviewed and annotated. When the annotations are complete, They will be integrated with the research records for the Research Phases in Section 8.

Ruby Carat has also placed interviews of Dr. Miles on her Cold Fusion Now! website at the following web locations:

- <https://coldfusionnow.org/anomalous-effects-in-deuterated-systems-melvin-miles-the-correlation-of-excess-heat-and-helium/>
- <https://coldfusionnow.org/dr-melvin-miles-on-helium-4-excess-heat-new-interview/>
- <https://coldfusionnow.org/melvin-miles-on-calorimetry/>

³¹ Transcriptions of Interviews. Memo to Melvin Miles from Tom Grimshaw. May 9, 2019.

³² Transcriptions of Second Round of Interviews. Memo to Mel Miles from Tom Grimshaw. July 22, 2019.

7 *Martin Fleischmann Correspondence Files*

Dr. Miles is a highly trained and experienced electrochemist who has made major contributions to the LENR field through his research with Fleischmann-Pons type cells. He was therefore particularly well qualified to work collaboratively with Dr. Fleischmann when he was still living. During this collaboration, Dr. Miles developed a large file of correspondence, and he has published a description³³. Three sets of these correspondence files were collected for the MLRDP. Another set, developed by Jed Rothwell and posted on his LENR-CANR.org website, is also referenced³⁴.

7.1 *Penultimate Papers, Part IV*

A major subcomponent of the Fleischmann correspondence is a multi-page document entitled “Penultimate Papers on the Isoperibolic Calorimetry of the Pt/D₂O and Pd/D₂O Systems”, Part IV³⁵. The document apparently is described on the cover with the subtitle, “An Experiment with a Pd-Cathode in 0.1M LiOD/D₂O Carried Out in 1989 by M. Fleischmann and M.H. Miles”. It has been scanned in three parts (A, B, C). The contents of each part are briefly described in Table 7-1. The three scanned parts have been added to the Project Dropbox folder.

7.2 *Fleischmann Manuscript on NHE Data*

Another Fleischmann addition to the Project was a marked-up document that Dr. Miles indicated was prepared by Martin Fleischman^{36,37}. The document is entitled “Report on the Data Analysis for Days 3-10 of Experiment FP2-97120401-M7c1”. It was “carried out by M.H. Miles in the period 5th of December 1997 – 11th February during his stay at the New Hydrogen Energy Laboratories (NHE) in Sapporo, Japan³⁸.” It consists of two parts – a manuscript and accompanying tabulated data and diagrams. Parts 1 and 2 have been scanned separately and added to the Dropbox folder. At the time

³³ Miles, M., 2016. Excerpts from Martin Fleischmann Letters. Journal of Condensed Matter Nuclear Science, vol. 19, p. 210-218.

³⁴ Rothwell, J., 2018. Letters from Martin Fleischmann to Melvin Miles. LENR-CANR.org. May.

³⁵ “Penultimate Papers, Part IV” for the Miles LENR Research Documentation Project. Memo to Mel Miles from Tom Grimshaw. February 2, 2020.

³⁶ Fleischmann Manuscript on NHE Data, Part 1 of 2. Memo to Melvin Miles from Tom Grimshaw. June 4, 2019.

³⁷ Fleischmann Manuscript on NHE Data, Part 2 of 2. Memo to Melvin Miles from Tom Grimshaw. June 5, 2019.

³⁸ Dr. Miles noted that notwithstanding the title of the paper, he was not actually involved in the experiment.

the document was scanned, Dr. Miles indicated that it may have significance for the LENR field, particularly Footnotes A and B (at the end of Part 1).

Table 7-1
Summary of Contents of Parts A, B, and C of “Penultimate Papers on the Isoperibolic Calorimetry of the Pt/D2O and Pd/D2O Systems”

Part	Contents
A	Letter from M. Fleischmann to S. Spzak and P. Boss, September 18, 2001, 6 handwritten pages
B	<p>Our Penultimate Papers on the Isoperibolic Calorimetry of the Pt/D2O and Pd/D2O Systems: Part IV; An Experiment with a Pd-Cathode in O. 1M LiOD/ D2O carried out in 1989. M. Fleischmann, Bury Lodge, Duck Street, Tisbury, Salisbury, Wilts., SP3 6LJ, U.K. M.H. Miles, Department of Chemistry, University of La Verne, La Verne, CA 91750, U.S.A.</p> <p>Abstract Introduction Experimental Results and Data Evaluation The Initial Consideration of the Data The Further Evaluation of the Data Further Evaluations The Rates of Excess Enthalpy Generation. Discussion Figures 1-12 Tables 1-3</p>
C	<p>Appendix A. It has been established that at low to intermediate cell temperatures (say $30^{\circ} < e < 80^{\circ}$) the behaviour of the calorimeters is modelled adequately by the differential equation...</p> <p>Appendix B. The redesign of the experiments covered inter-alia the following points...</p> <p>References Figures 1-10</p> <p>Letter from M. Fleischmann to M.H. Miles, August 7, 2003 Letter from M. Fleischmann to M.H. Miles, July 29, 2003</p> <p>OUR PENULTIMATE PAPERS ON THE ISOPERIBOLIC CALORIMETRY OF THE Pt-D2O AND Pd-D2O SYSTEMS:</p> <p>Part III. THE Pd-D CODEPOSITION SYSTEM</p> <p>M. Fleischman, Bury Lodge, Duck Street, Tisbury, Salisbury, Wilts., SP3 6LJ,U.K. M.R. Miles, Department of Chemistry, University of La Verne, LaVerne, CA 91750, U.S.A. S. Spzak, SSC San Diego, San Diego, CA 92152-5001, U.S.A. P.A Mosier-Boss, SSC San Diego, San Diego,CA 92152-5001, USA</p> <p>ABSTRACT INTRODUCTION EXPERIMENTAL DATA EVALUATION DISCUSSION REFERENCES Appendix Part III Figures 1-9 Tables 1-2</p>

7.3 Fleischmann Manuscript: “Long Letter”

One of the items Dr. Miles provided to the Project is a document he referred to as the “Long Letter”, which was from Martin Fleischman³⁹. The document consists of a one-page cover letter dated 23 June 1998 followed in sequence by another letter dated 18 June 1998. Also included are Addendums A to G to the second letter. The document was scanned in Part 1 for the letters and Part 2 for the Addendums. The scanned files have been included in the Project Dropbox folder.

7.4 Miscellaneous Martin Fleischmann Papers

Dr. Miles provided a stack of correspondence between himself and Martin Fleischman⁴⁰. He referred to it as “Miscellaneous Letters”. The date range is generally from 1992 to 2008. Dr. Miles also provided a letter from himself to Dr. Fleischmann dated October 29, 2000. He referred to the letter as “Codeposition”. Copies of these two files are included in the Project Dropbox folder.

7.5 “Letters from Martin Fleischmann to Melvin Miles” (Introduction by Jed Rothwell)

Most of Dr. Miles’ correspondence with Martin Fleischmann have been previously documented by Jed Rothwell. Ruby Carat assisted with scanning of the Fleischmann letters. In a phone conversation she has indicated that copies of the scanned files have been provided to Dr. Miles. The scanned letters, along with an informative introduction, have been placed in Rothwell’s LENR-CANR.org website⁴¹. Rothwell describes the document as follows:

This is a collection of letters between Martin Fleischmann, the co-discoverer of cold fusion, and Melvin Miles, who was one of the first to replicate the effect at the Naval Weapons Center, China Lake laboratory. It also includes some correspondence with Stanley Pons and various other people. The collection spans 13 years, from 1992 to 2005. Fleischmann and Miles coauthored several papers, including some with other researchers associated with the U.S. Navy, notably Pamela Mosier-Boss, Stanislaw Szpak and Ashraf Imam. Most of these papers are about calorimetry.

The document contains 167 letters in 690 pages (Table 7-2). The introduction by Rothwell is organized as follows:

³⁹ Fleischmann Manuscript on NHE Data (“Long Letter”). Memo to Melvin Miles from Tom Grimshaw. June 5, 2019.

⁴⁰ Copies of Martin Fleischmann “Miscellaneous Letters” and Codeposition Letter. Memo to Mel Miles from Tom Grimshaw. February 5, 2020.

⁴¹ Rothwell, J., 2018. Letters from Martin Fleischmann to Melvin Miles. <https://www.lenr-canr.org/acrobat/Fleischmanlettersfroa.pdf>.

- Introduction
- A Chronicle of Frustration and Failure
 - Dispute with NHE
 - Why the Project in France Failed
- Attacks by Skeptics
- Fleischmann's Attitude
- Chaotic Work Habits
- Fleischmann's Favorite Graph
- Notes on Text
 - Footnote Attributions
 - Source Materials
 - Spelling and Punctuation
 - Bury Lodge Heading
 - University of Southampton Heading
 - NAWC Heading
 - NAWC Fax Heading
 - NAWC Heading
- [kR'] Heat Transfer Coefficient Format
- Type A Palladium
- Letters

Some of the letters documented in Sections 7.1 to 7.4 are likely to be also included in Rothwell's document.

Table 7-2
List of Items in "Letters from Martin Fleischmann to Melvin Miles"

No	Item	Pg	No	Item	Pg	No	Item	Pg
1	1989-05-01	27	57	1999-01-12	260	113	2001-06-06	471
2	1992-01-21	33	58	1999-01-19	263	112	2001-07-10	473
3	1992-03-09	38	59	1999-01-28	265	115	2001-07-13	483
4	1992-03-23	41	60	1999-02-18	267	116	2001-08-05	484
5	1992-04-10	43	61	1999-01-12	260	117	2001-08-06	489
6	1992-04-14	62	62	1999-01-19	263	118	2001-08-14	490
7	1992-04-21	65	63	1999-01-28	265	119	2001-08-15	491
8	1992-04-24	77	64	1999-02-18	267	120	2001-08-24	493
9	1992-05-05	79	65	1999-02-28	271	121	2001-09-17	495
10	1992-05-07	98	66	1999-03-16	272	122	2001-09-18	496
11	1992-08-08	101	67	1999-03-29	282	123	2001-10-04	500
12	1993-04-08	131	68	1999-04-28	287	124	2,001-10-08	502
13	1993-05-10	133	69	1999-04-29	289	125	2001-10-26	504
14	1993-09-21	134	70	1999-05-28	292	126	2001-10-27	508
15	1993-10-22	143	71	1999-06-21	293	127	2001-10-29	509
16	1995-02-02	146	72	1999-06-22	295	128	2001-12-12	510
17	1995-02-23	148	73	199909-17	297	129	2002-01-04	514
18	1995-03-01	149	74	1999-09-20	301	130	2002-04-04	517
19	1995-05-16	150	75	1999-10-28	302	131	2002-04-22	519
20	1996-12-08	151	76	1999-11-19	303	132	2002-05-03	531
21	1997-05-12	152	77	1999-11-19#2	308	133	2002-07-08	544
22	1997-05-12#2	162	78	1999-12-02	314	134	2002-08-30	546
23	1997-06-17	163	79	1999-12-21	316	135	2002-09-08	551
24	1997-06-18	164	80	1999-12-21#2	320	136	2002-09-09	560
25	1997-09-10	165	81	1999-12-22	322	137	2002-09-23	564
26	1997-09-10#2	166	82	1999-12-27	324	138	2002-09-30	572
27	1997-12-01	167	83	2000-01-06	327	139	2002-12-02	577
28	1998-05-11	171	84	2000-01-06#2	329	140	2002-12-20	582
29	1998-05-14	177	85	2000-01-07	331	141	2003-02-25	585
30	1998-05-17	179	86	2000-01-10	335	142	2003-02-27	593
31	1998-05-19	181	87	2000-01-10	339	143	2003-03-20	598
32	1998-06-01	182	88	2000-01-14	341	144	2003-03-29	604
33	1998-06-03	187	89	2000-02-02	349	145	2003-05-12	606
34	1998-06-09	190	90	2000-02-03	350	146	2003-05-14	613
35	1998-06-22	195	91	2002-02-15	360	147	2003-05-19	621
36	1998-06-23	196	92	2000-02-17	363	148	2003-05-26	623
37	1998-06-30	197	93	2000-02-29	367	149	2003-06-19-paper-submission	624
38	1998-07-02	215	94	2000-03-14	371	150	2003-06-19	627
39	1998-07-03	216	95	2000-03-17	372	151	2003-06-20	631
40	1998-07-03#2	218	96	2000-04-11	374	152	2003-07-01	633
41	1998-07-10	221	97	2000-06-13	376	153	2003-07-04	634
42	1998-07-13	225	98	2000-06-26	379	154	2003-07-28	637
43	1998-07-23	226	99	2000-06-26#2	382	155	2003-09-12	641
44	1998-08-12	229	100	2000-07-02	393	156	2003-10-24	646
45	1998-08-14	231	101	2000-07-20	399	157	2003-10-27-letter-to-Hagelstein	647

46	1998-08-15	232	102	2000-09-27	404	158	2003-10-27	651
47	1998-08-31	234	103	2,000-10-30	405	159	2003-11-21	652
48	1998-09-09	240	104	2,000-11-11	408	160	2004-03-15a	653
49	1998-09-10	241	105	2000-11-27	413	161	2004-03-15b	658
50	1998-09-14	243	106	2000-12-20	423	162	2005-02-24	661
51	1998-09-15	247	107	2001-01-11	426	163	2005-03-0	668
52	198-10-30	254	108	2000-01-11	428	164	2005-05-12	670
53	1998-11-07	256	109	2001-01-29	438	165	2006-07-01	677
54	1998-12-25	259	110	2001-04-16	454	166	2005-08-15	684
55	1998-11-07	256	111	2001-04-22	467	167	2005-09-05	686
56	1998-12-25	259	112	2001-06-03	469			
57	1999-01-12	260						

8 Research Phases

Dr. Miles was born and raised in St. George, Utah, where he attended high school and his first two years of college at Dixie College (now Dixie State University). His professional career may be summarized from the two sets of interviews conducted for the MLRDP. Additional information is available from the number of publications, particularly by Jed Rothwell⁴². His research took place in four phases, beginning with his lengthy work as a chemist prior to the 1989 announcement of LENR. Most of his LENR work took place at the NAWC and at Japan's NHE Laboratory in Sapporo.

8.1 Pre-LENR Research

After completing his work at Dixie College, Dr. Miles received his BA degree in chemistry (minor in mathematics) at Brigham Young University. He then pursued a PhD in physical chemistry (minor in physics) at the University of Utah, working under Henry Eyring and Edward Eyring. His dissertation was on temperature jump kinetic studies⁴³. After his Ph.D. work, Dr. Miles received a NATO Postdoctoral Research Fellowship award and studied with Heinz Gerischer at the Technical Institute in Munich, Germany, where his focus was on electrochemistry (electrochemical kinetics). Following this assignment, he obtained a position at the Naval Ordnance Laboratory in Corona, California conducting research on liquid ammonia batteries. This position continued from 1967 to 1969.

When the Corona lab closed in 1969, Dr. Miles held the position of assistant (and associate) professor at Middle Tennessee State University for about nine years. During this period, he had summer appointments at NAWC (then the Naval Weapons Research Station) and – for two summers – at Brookhaven National Laboratory. The NAWC appointments led to a permanent post in 1978, when he became a research electrochemist working on thermal batteries using molten nitrates. While at NAWC, Dr. Miles also conducted research on carbon dioxide reduction, corrosion,

⁴² Rothwell, J., 1997. Introduction to the Cold Fusion Experiments of Melvin Miles. *Infinite Energy*, Issue 15/16, p. 27. Revised and updated 2004

⁴³ Miles, M., 1966. Temperature Jump Kinetic Study of Substituted Malonic Acids. Ph.D. Dissertation, Department of Chemistry, University of Utah, 184 p.

electrochromics and analysis using electrochemistry. He held his NAWC position, with temporary assignments at other organizations and locations, until he retired in January 2002.

8.2 *LENR Research at NAWC*

Dr. Miles first heard of the LENR announcement on the radio. Because his NAWC research used methods similar to the electrolytic cell used by Fleischmann and Pons, he immediately recognized LENR's potential. He began experiments in his laboratory on his own time within two days of the March 23 announcement. He was able to do so because both palladium and heavy water were available at the NAWC lab.

He was joined in LENR research by David Stilwell and Kwong Park. Initially their palladium sample was from local stock, but later they were able to get a more suitable sample from Johnson-Mathey. Experiments were conducted for eight months before excess heat was first observed. David Stilwell presented their research at the DOE/LANL cold fusion workshop at Santa Fe, New Mexico in May 1989⁴⁴. Excess power had not yet been observed at that time.

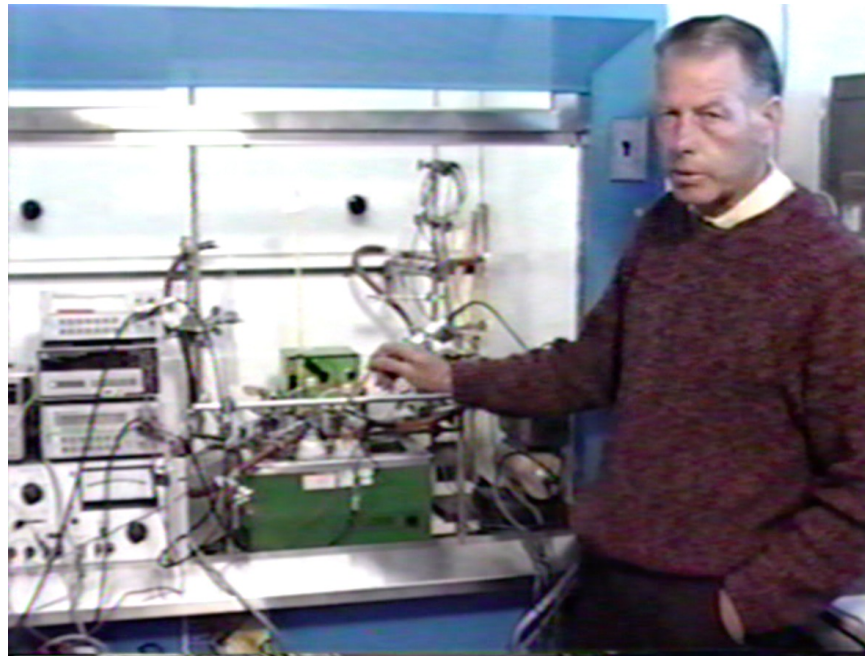
Subsequently, Dr. Miles began LENR research with Ben Bush, who was working with Dr. J.J. Lagowski, a faculty member in the chemistry department at The University of Texas at Austin (UT). Bush's expertise was in avoiding contamination from air leakage while working with a mass spectrometer at UT. This collaboration resulted in the first establishment of a correlation of the production of helium with excess heat production, which remains one of Dr. Miles' major contributions to the LENR field. This discovery was published in 1991⁴⁵ and was subsequently described in a review paper⁴⁶. Photos of Dr. Miles and Ben Bush from a video⁴⁷ about their calorimetry and helium work are in Figures 8-1 and 8-2. Additional photos of the lab at NAWC are in Figures 8-3 and 8-4.

⁴⁴ Miles M., and D. Stilwell, 1989, Electrochemical Calorimetric Studies on Water and Deuterium Oxide Electrolysis. in Workshop on Cold Fusion Phenomena, May 23-25, 1989, Santa Fe, New Mexico. Sponsored by Los Alamos National Laboratory and the U.S. Department of Energy. p. 48.

⁴⁵ Bush, B., M. Miles, G. Ostrom, and J. Lagowski, 1991. Helium Production during the Electrolysis of D2O in Cold Fusion Experiments. *J. Electroanal. Chem.*. Volume 304: p. 271.

⁴⁶ Miles, M., 2003. Correlation of Excess Enthalpy and Helium-4 Production: a Review, in Tenth International Conference on Cold Fusion, Cambridge, MA.

⁴⁷ Miles, M., and B. Bush, 1991. Helium Production during the Electrolysis of D2O in Cold Fusion Experiments. V.P. No 91-137, Film Video Projects Branch, Naval Weapons Center, China Lake, CA. 8 Minutes.



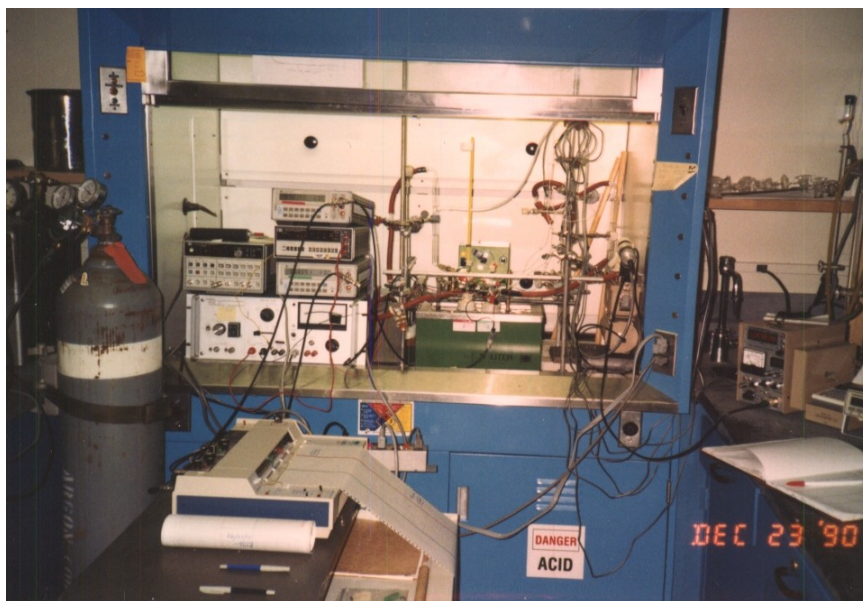
*Figure 8-1
Dr. Miles Explaining the Experiments with Two Electrolytic Cells in the “Center Hood”
(White Objects Shown Below and to the Left of His Hand).*



*Figure 8-2
Ben Bush Describing the Method of Helium Gas Sample Collection from the Electrolytic Cells*



*Figure 8-3
Overall View of Dr. Miles' Lab at NAWC*



*Figure 8-4
Dr. Miles' "Center Hood", Where the Excess Heat Was Measured and Helium Was Collected from the Cells*

While at NAWC, Dr. Miles also participated in a LENR research initiative, beginning in 1992, involving three US Navy Laboratories – Naval Research Laboratory in Washington, D.C., SPAWAR in San Diego, and NAWC. The initiative, which was sponsored by the Office of Naval Research, lasted until funding was discontinued in 1995. From that point, Dr. Miles was not permitted to conduct LENR research at NAWC.

8.3 Research at New Hydrogen Energy, Japan

Dr. Miles took a leave of absence from NAWC to conduct LENR experiments as a Guest Researcher for the New Energy and Industrial Technology Development Organization (NEDO) in Japan. The position was at the New Hydrogen Energy laboratory in Hokkaido and was for the period October 1997 to March 1998. NHE had been started in 1994 and was supported by Japan's Ministry of International Trade and Industry. The research program was apparently intended to be guided by previous LENR work supported by Technova^{48,49}. A photo of the Technova "Icarus 2" document from Dr. Miles' files appears in Figure 8-5. His research is described in a final report⁵⁰ and in an article in Infinite Energy magazine.

Dr. Miles conducted many types of LENR experiments while at NHE. Two of the most significant were with "China Lake type cells" (Cells A and B) and with "Fleischmann-Pons Dewar type cells" (Cells 1, 2 and 3). All were performed with D₂O. The results are summarized in Figure 8-6 (Tables 1 and 2 of the Infinite Energy article⁵¹). Excess power of 100 mW was observed in Cell A (First Study) and 90 and 250 mW in Cell B in the Second and Third Studies.

⁴⁸ Technova, Inc., 1993. Handbook "ICARUS" Isoperibolic Calorimetry; Acquisition, Research. and Utilities System "Version 1, Low Power Measuring System for Three Cells, December (1993), Technova., 13th Floor, Fukoku Seimei Building, 2-2-2 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100, Japan. December.

⁴⁹ Technova, Inc., 1995. Handbook: "ICARUS 2": Isoperibolic Calorimetry: Acquisition, Research and Utilities System" Version 2.00, Technova., 13th Floor, Fukoku Seimei Building, 2-2-2 Uchisaiwai-cho Chiyoda-ku, Tokyo 100, Japan. February.

⁵⁰ Miles, M., 1998. Electrochemical Calorimetric Studies of Palladium and Palladium Alloys in Heavy Water. NEDO Final Report.

⁵¹ Miles, M., 2000. Report on Calorimetric Studies at the NHE Laboratory in Sapporo, Japan. Infinite Energy, Issue 30 (March/April).

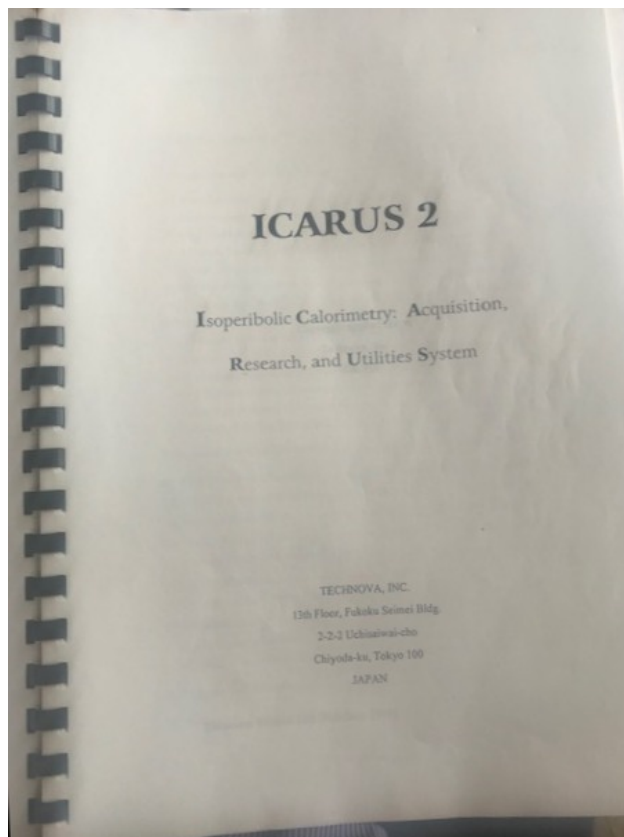


Figure 8-5.

ICARUS 2 (Isoperibolic Calorimetry Acquisition Research and Utilities System) Document⁵²

In the second set of experiments, different techniques were used in the three studies – palladium alloy rods, codeposition on a copper rod and electromigration with thin palladium wires. In the first study excess power was observed in Cells 2 and 3 but not in Cell 1. All three cells showed excess power in the second study. Cell 2 showed excess power in the third study, but Cell 1 did not. It could not be determined if Cell 3 had excess power because of a cell construction error.

⁵² Miles, M., 2000. Report on Calorimetric Studies at the NHE Laboratory in Sapporo, Japan. Infinite Energy, Issue 30. March/April.

Table 1. Summary of NHE Experiments Using China Lake Cells

STUDY	CELL A	CELL B
First	Pd Rod Constant Current $P_x = 100$ mW	Pd Rod Constant Current Control ($P_x = 0$)
Second	Pt Particles Constant Current Control ($P_x = 0$)	Pd Particles Constant Current $P_x = 90$ mW
Third	Pt Particles Pulse Electrolysis Control ($P_x = 0$)	Pd Particles Pulse Electrolysis $P_x = 250$ mW

Table 2. Summary of NHE Experiments Using Fleischmann-Pons Cells

STUDY	CELL 1	CELL 2	CELL 3
A	Pd-Ce-B Rod $P_x = 0$	Pd-0.5B Rod $P_x = 250$ mW	Pd-Ce Rod $P_x = 200$ mW
B	Co-deposition Cu Rod $P_x = 150$ mW	Co-deposition Cu Rod $P_x = 400$ mW	Co-deposition Cu Rod $P_x = 400$ mW
C	Electromigration Thin Pd Wire $P_x = 0$	Electromigration Thin Pd Wire $P_x = 150$ mW	Electromigration Thin Pd Wire (?)

Figure 8-6.

Summary of Results of Two Sets of Experiments Performed by Dr. Miles at NHE

Although Dr. Miles conducted his experiments successfully at NHE and described his methods and results in his final report in English⁵³, the final NHE report for the organization after it closed in March 1998 was in Japanese. It apparently did not include Dr. Miles LENR findings⁵⁴. Other deeper problems with the NHE research program and staffing were identified before and after the

⁵³ Miles, M., 1998. Electrochemical Calorimetric Studies of Palladium and Palladium Alloys in Heavy Water. NEDO Final Report.

⁵⁴ Unfortunately, Dr. Miles found out about the discrepancy after the fact, when Jed Rothwell translated the NHE report from the Japanese.

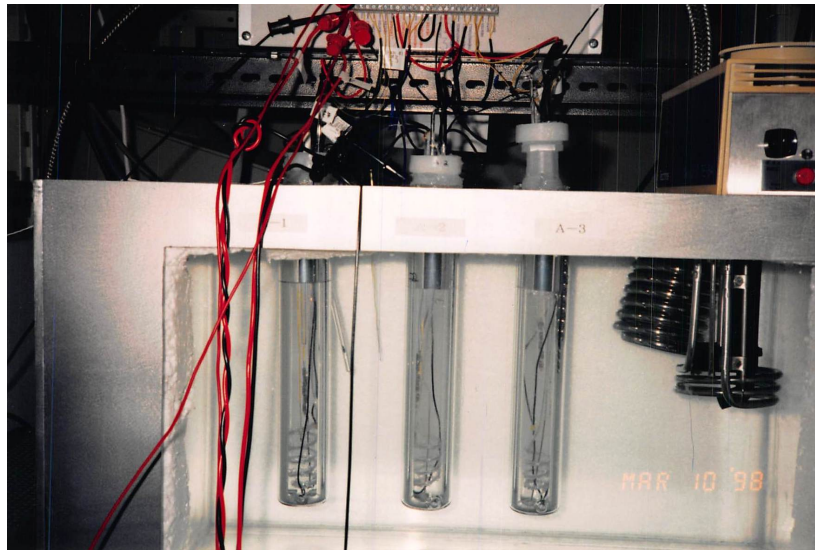
organization came to an end^{55,56}. Because his LENR investigations were within the NHE lab, but independently, Dr. Miles remains confident of the outcome of his work as NEDO Guest Researcher. Photos of the second set of experiments (third study, with very thin Pd wires) with the three Fleischmann-Pons type cells are in Figures 8-7 and 8-8. A photo of part of the NHE Laboratory is in Figure 8-9. NHE staff, including Dr. Miles and Dr. Naoto Asami, manager of NHE, are shown in Figure 8-10.

8.4 Continued Professional Activities in LENR

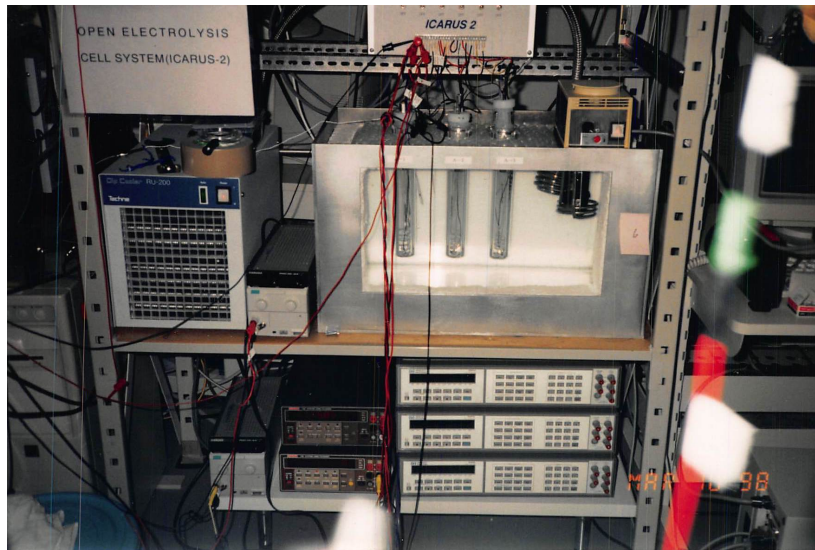
After completing his LENR work as NEDO Guest Researcher at NHE in 1998, Dr. Miles ended his leave of absence and returned to NAWC, where he remained until he retired in January 2002. He then was a visiting professor (or adjunct professor) at three academic institutions at different times – Middle Tennessee State University (where he had worked previously), Bates College in Maine, and the University of LaVerne in California. He also continued to work as a contractor at NAWC conducting research on molten nitrates for thermal batteries and on codeposition LENR experiments. In the years since his NAWC retirement, Dr. Miles has continued to be a leader in the LENR field, attending the ICCF conferences and publishing papers in LENR journals (and in mainstream publications when the manuscripts were accepted). He operated a LENR laboratory at his home in Ridgecrest, California before he moved to his current home in St. George, Utah, which is the city where he was born and raised.

⁵⁵ Rothwell, J., and E. Mallove, 1997. Official Japanese New Hydrogen Energy (Cold Fusion) Program to End – Missed Opportunities and Botched Management. *Infinite Energy*, Issue 15 & 15, July-November. p. 24.

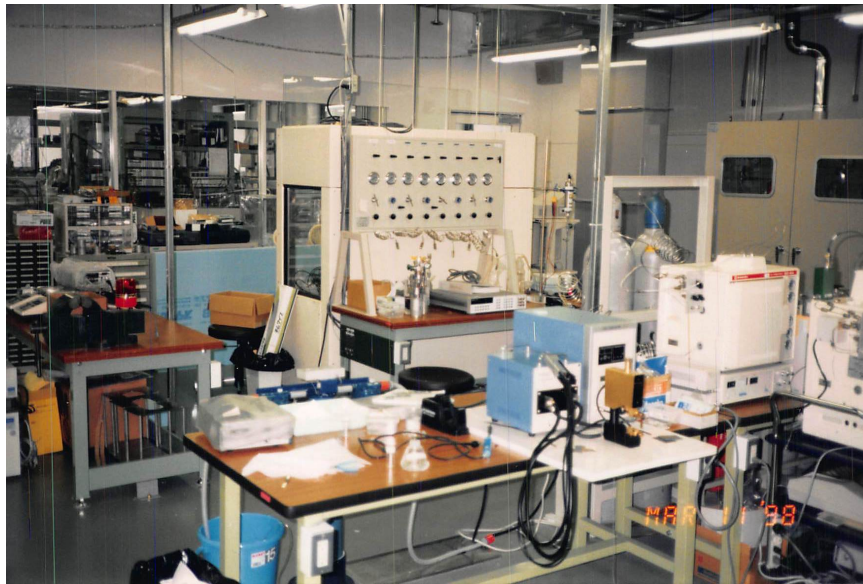
⁵⁶ Rothwell, J., 2000. The Collapse of the NHE Project. *Infinite Energy*, Issue 30, p.26.



*Figure 8-7
Closeup View of Fleischmann-Pons Cells (Cells 1, 2, 3), Third Study (Electromigration with Thin Palladium Wires). Photo Taken March 10, 1998.*



*Figure 8-8
View of Fleischmann-Pons Type Cells with Associated Equipment. Photo Taken March 10, 1998.*



*Figure 8-9
View of a Portion of the NRE Lab. Photo Taken March 11, 1998.*



*Figure 8-10
Picture of NHE Researchers and Staff in Lab Meeting Room. Andrei Lipson and Paolo Tripodi in Front on the Left. Dr. Miles and Naoto Asami in Front on the Right. Photo Taken March 19, 1998.*

8.5 LENR Research Summary

Dr. Miles has been a successful researcher in chemistry or over 50 years. He has received a number of honors and awards in his professional career⁵⁷. These have included the NATO Postdoctoral Research Fellowship Award noted above, two Sigma Xi Awards at NAWC, the William B. McLean Award at NAWC, and the NAWC Fellow Award. In the LENR field he received the Truffle Award (precursor to the Preparata Award, which is one of the most distinguished in the field) in 1999. A recognition that occurred early in the LENR field was a Certificate of Appreciation to Dr. Miles dated May 7, 1989⁵⁸. The certificate was for a presentation on “‘Cold’ Fusion Technology Status”. It hangs on a wall in Dr. Miles’ home and is shown in Figure 8-10.



Figure 8-10

Dr. Miles’ Award for LENR Presentation at the U.S. Naval Weapons Center (NWC)

⁵⁷ Melvin Miles’ Professional Biography as of 2005. Memo to Melvin Miles from Tom Grimshaw. July 14, 2019.

⁵⁸ Award for LENR Presentation. Memo to Melvin Miles from Tom Grimshaw. June 11, 2019.

9 *Future Opportunities*

The interview transcriptions continue to be reviewed and annotated for the MLRDP. When this work is completed, the annotations can be combined with the descriptions of the research record for completing Dr. Miles' research phases. Additional future work for the MLRDP may also include the following:

- Make sure that all reports and other hardcopy LENR documents in Dr. Miles' materials have been incorporated in the Project
- Obtain electronic (PDF) versions of all of Dr. Miles reports and other publications and place them in the Project Dropbox folder.
- Copy and segregate the LENR-related files included in the sets of electronic files
- Secure and document the entire contents of the notebooks described in Section 4
- Review and annotate the Martin Fleischmann correspondence and prepare a distillation of the contents for the benefit of the entire LENR field

It is anticipated that many of these future opportunities may be accomplished for a future draft of the MLRDP report.

10 Project Methods

The methods used in the MLRDP are based on general LRDI procedures that are modified to meet the specific requirements of individual LENR investigators⁵⁹. The project is being performed according to accepted project management practices⁶⁰. As noted above, the overall LRDI procedure is set forth in a recent article in Infinite Energy⁶¹.

With the assistance of Dr. Dave Nagel, initial contact was made with Dr. Miles to describe the overall LRDI and the specific proposed objectives of the MLRDP. Dr. Nagel provided two lengthy lists of Dr. Miles' publications, and a third list was obtained by searching LENR-CANR.org for "Melvin Miles". Four visits have been made to Dr. Miles at his home in St. George, Utah for interviews and information collection:

5/5/19 to 5/6/19

5/27/19 to 5/29/19

7/18/19 to 7/19/19

10/31/2019

During the visits, Dr. Miles' professional resume was obtained, two sets of the interviews were conducted, electronic files were obtained, hardcopy records were inventoried, and the contents of his LENR library were recorded. The procedure included taking photos of Dr. Miles and his LENR records, recording the interviews and obtaining transcripts from an online service, conducting inventories of electronic, hardcopy and other files, and scanning selected materials.

About 33 memos were as progress was made⁶² (Table 10-1). A Dropbox folder is being used to store the electronic files found and the memos and reports prepared for the Project⁶³ (Figure 10-1). The Dropbox folders were in general numbered sequentially as materials were located and progress was

⁵⁹ Grimshaw, T.W., 2019. Collection, Organization, and Documentation of LENR Research Results: Guideline. January.

⁶⁰ Project Management Institute, 2017. A Guide to the Project Management Body of Knowledge (PMBOK® Guide) — Sixth Edition and Agile Practice Guide (ENGLISH). Project Management Institute. Newtown Square, PA.

⁶¹ Grimshaw, T., 2020. Documenting Cold Fusion Research: Preserving a Vital Asset for Humankind. Infinite Energy, Issue 150, March/April 2020, p. 9-13.

⁶² Memos Prepared for the Miles LENR Research Documentation Project. Memo to Mel Miles from Tom Grimshaw. February 6, 2020.

⁶³ Miles Files on Dropbox. Memo to Mel Miles from Tom Grimshaw. March 3, 2020.

made. For records requiring a large amount of storage space, a supplemental external hard drive is being used. This hard drive is also utilized for periodic backup of the MLRDP and other LRDI project files.

Table 10-1

List of Memos for the Melvin Miles LENR Research Documentation Project

1/9/2019	Nagel's Listing of Miles' CF/LANR Papers
3/2/2019	Listing of Miles' CF/LANR Papers on LENR-CANR.org
5/9/2019	Transcriptions of Interviews
5/28/2019	U.S. Navy Reports in Your Collection of Documents
6/1/2019	Inventory of ICCF Conference Materials and Cold Fusion Books
6/2/2019	Inventory of Cold Fusion and Related VHS Tapes
6/3/2019	Cold Fusion Entries in Lab Notebooks from Naval Air Warfare Station
6/4/2019	Fleischmann Manuscript on NHE Data, Part 1 of 2
6/5/2019	Fleischmann Manuscript on NHE Data, Part 2 of 2
6/5/2019	Fleischmann Manuscript on NHE Data ("Long Letter")
6/9/2019	Inventory of Electronic Files on CDs
6/10/2019	Electronic Files in Laptop Computers for the Miles LENR Research Documentation Project
6/11/2019	Award for LENR Presentation
6/12/2019	Posters in Garage
7/9/2019	Lab Notebooks from Miles' LENR Research at New Hydrogen Energy, Japan
7/14/2019	Melvin Miles' Professional Biography as of 2005
7/22/2019	Transcriptions of Second Round of Interviews
8/8/2019	Cold Fusion and Related VHS Tapes: Digital Copies to Date
8/16/2019	Cold Fusion Entries in Lab Notebooks from Naval Air Warfare Station (Memo 2)
8/26/2019	Example Cold Fusion Entries in Naval Air Warfare Station Lab Notebook # 20
8/27/2019	Partial Contents of Naval Air Warfare Station Lab Notebook #21
8/29/2019	Photocopy of NHE Lab Notebook #1
11/5/2019	Inventory of Photos for the Miles LENR Research Documentation Project
12/24/2019	Cold Fusion and Related VHS Tapes: Additions to Copied Tapes
1/7/2020	LENR-Related Photos – Identifications of Contents and Scanning for Image Files
1/9/2020	NHE Photos from Steve Katinsky
1/17/2020	Cold Fusion and Related VHS Tapes: Additions of Tapes from Linda Miles
1/19/2020	Replacement of 60 Minutes VHS Tape Digital Copy: Copy from SKINR
1/26/2020	Hardcopy LENR Papers for the Miles LENR Research Documentation Project
2/2/2020	"Penultimate Papers, Part IV" for the Miles LENR Research Documentation Project
2/5/2020	Copies of Martin Fleischmann "Miscellaneous Letters" and Codeposition Letter
2/6/2020	Memos Prepared for the Miles LENR Research Documentation Project
3/3/2020	Miles Files on Dropbox

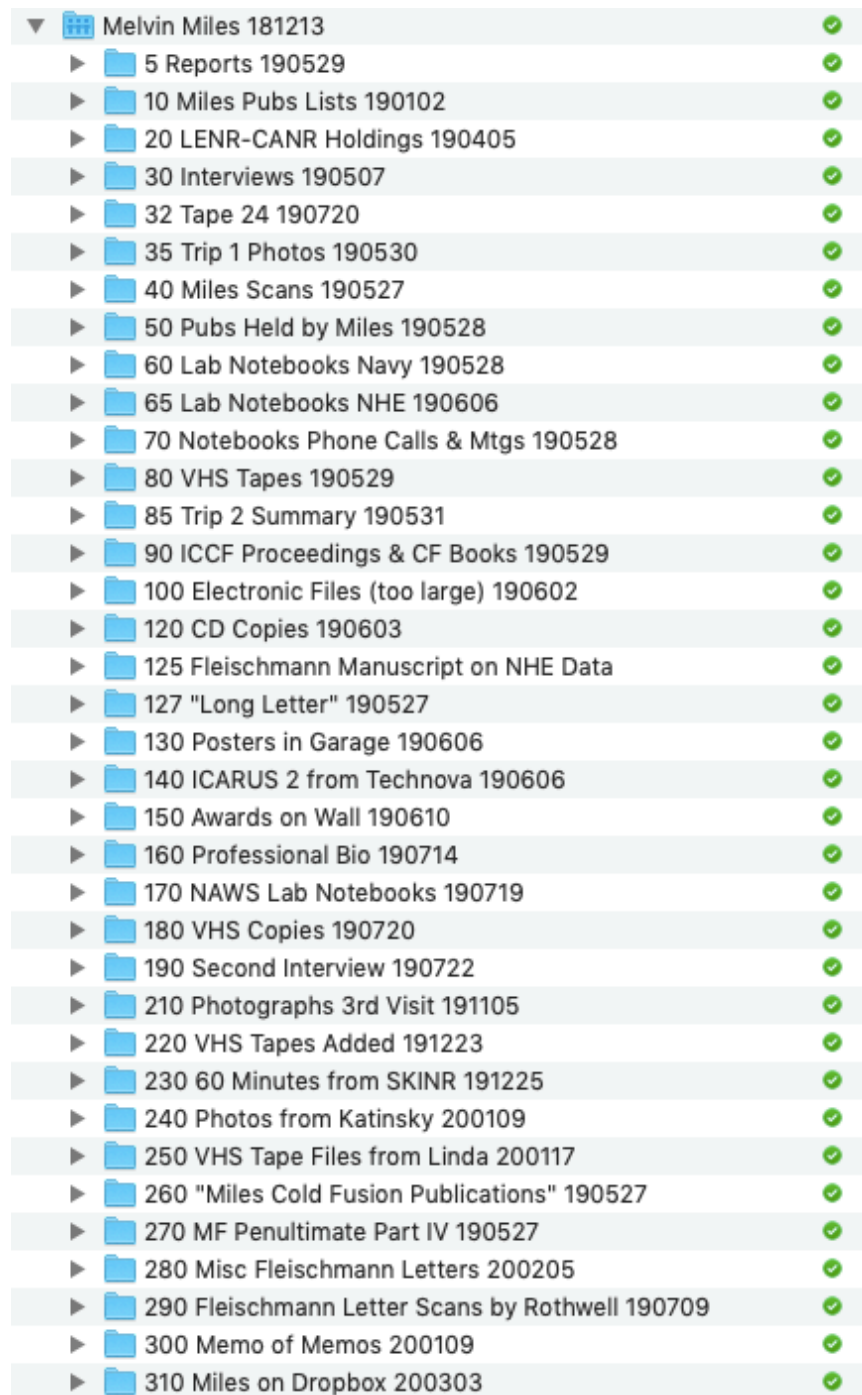


Figure 10-1

Screenshot of "Melvin Miles" Folder on Dropbox

Appendices (Volume 2)

Appendix A. Cold Fusion Papers by Dr. Miles

Appendix B. Identifications of Individuals, Etc. in Dr. Miles Photos

Appendix C. Transcriptions of Dr. Miles Interviews

Interview Set 1, May 2019

Interview Set 2, July 2019