



LENR Research Documentation Initiative

Progress in Methods and Participants

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Researchers Are Leaving the Field

- LENR rejected by mainstream science within a year after 1989
- Pariah science: few new researchers
- Long-term researchers now leaving the field
- Risk of loss of research record
- Tragedy for LENR field – and for humanity



Martin Fleischmann
1927 - 2012
(Photo Courtesy of Infinite Energy Magazine)



LENR Research Documentation Initiative (LRDI)

- Mitigates the loss of LENR research
- Captures and preservation of records
- Maintains researcher ownership
- Allows reexamination of LENR research record (“leaching the tailings”)
- Designs individual projects for each researcher or participant
- Began with pilot project with Ed Storms
- Based on foundation of 10 years of LENR contributions



Overview of LRDI Methods

- Information collection, organization, documentation, preservation
- Foundational approach developed in pilot project
- Customized for each researcher
- Begin with professional biography
- Memos for each Component
- Interviews of participants
- On site visits highly preferable
- Research phases (timeline) defined
- Project reports based on interviews and collection of memos

Typical Project Components

- Publications & presentations
- Unpublished reports
- Electronic files: current & legacy media
 - Documents (reports, etc.)
 - Experimental data
- Hardcopy records
- LENR laboratory
- Lab and other notebooks
- LENR books and journals (library)
- Conference proceedings (e.g., ICCF)



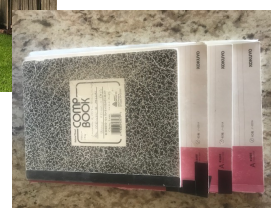
Electronic Files



Hardcopy Files



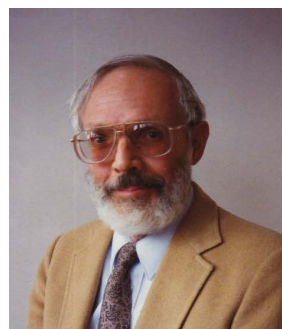
LENR Laboratory



Lab Notebooks

Pilot Project: Edmund Storms' 29 Years of LENR Research

- ICCF-21 poster
- Los Alamos National Laboratory (retired)
- Preparata Medal, 2005
- Components
 - Professional biography
 - Publicly available documents
 - Unpublished reports
 - Electronic files (many media)
 - Hardcopy files
 - LENR laboratory
 - Lab notebooks
 - LENR Library
- Interviews (3 sets)
- Research Phases: LANL, ENECO, Lattice Energy, KivaLab
- Reports: Stage 1, 2, 3; Summary
- Supplemental project underway (post-2015)



Ed Storms in about 2000

LRDI Projects (“Storms + 6”)

- Edmund Storms supplement (LANL retired)
- Tom Claytor & Malcolm Fowler (LANL retired)
- SKINR: Dennis Pease, Arik El-Boher, Graham Hubler
- David Nagel (NRL retired, GWU)
- Mahadeva Srinivasan (BARC retired)
- Dennis Letts (LettsLab)
- Melvin Miles (NAWC China Lake, retired)

Tom Claytor & Malcolm Fowler

- Los Alamos National Laboratory (retired)
- Claytor: Preparata Medal, 2017
- Phases: LANL, High Mesa & McFarland, current confidential
- LANL Methods
 - Gas loading: neutrons, tritium
 - Gas plasma: tritium
- Collaborations at LANL
 - Steve Jones
 - Roger Stringham
 - Russ George
 - Cincinnati Group
 - Dennis Cravens
 - Les Case



*Malcolm Fowler and Tom Claytor
High Mesa Technology
White Rock, NM, 2019*



Claytor & Fowler Research Record Components

- Interviews: 3 sets
- Professional biographies
- Publications
- Unpublished reports
- Electronic files
- Hardcopy records
- LENR library (Claytor)
- LENR laboratories



*Tom Claytor's High Mesa Technology
White Rock, NM*



*Malcolm Fowler's McFarland Industries
Espanola, NM*



David J. Nagel



THE GEORGE
WASHINGTON
UNIVERSITY
WASHINGTON, DC

Naval Research Laboratory
(1962-1998, Retired)

The George Washington
University (1998-Present)

LENR Research & Activities
(1989-Present)



*Dave Nagel and Ashraf Imam
The George Washington University, 2018*

Components of Nagel's LENR Research Record



- Professional biography
- Transcripts of two previous interviews
- Over 100 presentations on LENR
- 22 LENR journal publications
- 27 articles in Infinite Energy magazine
- More than 150,000 electronic files
- Eight file cabinets of hardcopy records
- Attended all ICCF conferences
- Extensive ICCF files and reviews
- LENR library: four bookshelves
- Sophisticated LENR research lab
- LENR company: NUCAT Energy LLC
- LENR company: LENRIA Corporation



*Five of Nagel's
Eight LENR File Cabinets*



*Nagel in the
LENR Lab at GWU*



Mahadeva Srinivasan

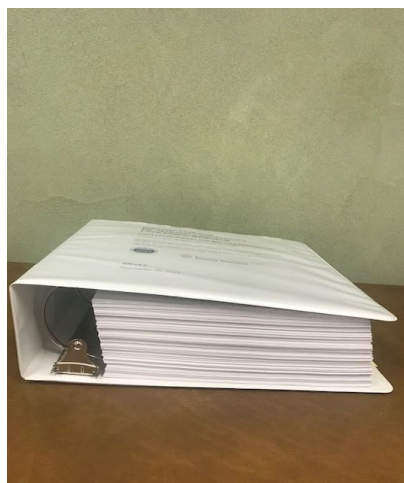


- Bhabha Atomic Research Center (BARC), Retired
- Components
 - Professional biography
 - Publications
 - Unpublished reports
 - Two previous interviews: 1994, 2011
- Six phases of LENR research
- Reports: Collected Papers and Research Phases (2 Volumes)



*"Chino" Srinivasan with Martin Fleischmann
(Probably at ICCF-15, Chennai, India, 2011)*

Collection of Srinivasan's 44 LENR Papers

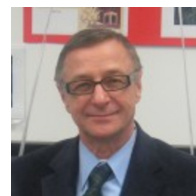


SKINR: Dennis Pease, Arik El-Boher, Graham Hubler



- Sidney Kimmel Institute for Nuclear Renaissance
- 4/2012 – 12/2017
- University of Missouri
- Formerly Energetics Technologies, Israel
- Interviews of Pease, El-Boher, Hubler
- Records are now with Dennis Pease

*Graham Hubler
Photo from ResearchGate*



*Dennis Pease in His Office,
Columbia, MO, 2019*



*Arik El-Boher (Left) and Dave Nagel
ICCF-20, 2016*

Components of SKINR Research Record

- Professional biographies
- Publications: over 60 on LENR-CANR.org
- Annual reports (6), 2012-2017
- Lab procedures: electrolysis, gas loading, gas discharge
- Lab notebooks: about 16
- Electronic files: several media, six sets, over 30,000 files
- Hardcopy materials: 11 boxes



*Hard Drives G, H, and I:
Containing SKINR Electronic Files*

Dennis Letts

- LettsLab, Austin, Texas
- Began in LENR field in 1990
- Two sets of interviews
- Three LENR research phases
 - Independent research
 - Collaborations
 - Current confidential
- Previous emphasis on electrolytic cells
- Current focus on gas loading



*Dennis Letts in His Home Lab,
Austin, TX, 2019*



Components of Letts LENR Research Documentation

- LENR laboratory:
LettsLab, Austin
- Collection of papers for
independent LENR study
- Publications
- Unpublished reports
- Lab notebooks
- Electronic files
- LENR library



*Two Views of LettsLab
Austin, TX, 2019*



Melvin Miles

- Naval Air Warfare
Center – China Lake,
retired
- Truffle Prize, 1999
(antecedent to
Preparata Medal)
- Phases
 - NAWC
 - New Hydrogen Energy,
Japan
 - Middle Tennessee State
and other universities
- Interviews: 2 sets



*Mel Miles in His Back Yard
St. George, UT, 2019*

Melvin Miles LENR Research Components

- Professional biography
- 200+ publications
- Extensive Martin Fleischmann correspondence
- Over 11,000 electronic files: computers, CDs
- Lab notebooks
 - NAWC
 - New Hydrogen Energy
 - Log of events and interactions
- LENR library
- VHS tapes: about 40



Miles' Lab Notebooks from LENR Experiments at NAWC, 1989-95

Lessons Learned

- Sound procedural foundation developed in Storms pilot project
- Flexibility required: every researcher is different
- Stepwise approach verified (memo building blocks) for report
- Interviews essential to complement the record
- On-site visits highly preferable
- Variable extent of records (existence, availability)
- IP considerations – retention of ownership by researcher
- NDA considerations not yet constraining



Future Opportunities

- More intensive Components analysis (detailed timeline) for researchers
- Long-term availability for re-analysis (“leaching the tailings”)
- Additional participants (extension of scope)
- Refinement of methods (continued)
- “Value of research” considerations
- Intellectual property possibilities
- Cloud solution for permanent and secure archive?
- Integrated report for participants and research records



*Thanks to the Anthropocene
Institute for Supporting
the LRDI!*



Questions?

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