THE 2019 WHO's WHO of LENR - COLD FUSION Version 3.4 21/4/2019

Compiled and updated by Alan Smith. Based on sources including publications by Anthropocene Institute, LENR-Forum, ECat World, LENRIA and condensed-plasmoids.com. I am also grateful for input and corrections from fellow members of ISCMNS. For amendments and additions please contact me via email. <alan@hydrogenmine.com>

I2HMR - ACTIVE

Nicolas Armanet (and colleagues), researching LENR in Hydrogen in Metals

AEROSPACE CORPORATION (USA): ACTIVE

- One of the presentations at the recent ICCF-21 conference was by Edward J. Beiting of the Aerospace Corporation, a California R&D non-profit on "Investigation of the Nickel-Hydrogen Anomalous Heat Effect"
- Privately funded with support from others including NASA (?).

AIRBUS (EU): STATUS CURRENTLY UNKNOWN

• Published a couple of LENR-linked patents, hosted a conference at their Tolouse (France) HQ, research under supervision of J-F Geneste, now working elsewhere. Collaborators included Dr. Bernhard Kotzias.

ATOM-ECOLOGY/ECALOX Ltd. (UK): ACTIVE

- Cold fusion company Atom-Ecology's tech is derived from 30 years of work in the field by Russ George who has founded
 and orchestrated funding for fusion-based companies. His work has been supported by major scientific bodies in the USA
 and has demonstrated working Hot& Dry, Glow Discharge and Sono Fusion systems.
- Ecalox also works on hydrogen catalysis and production and has interests in recycling difficult materials. Ecalox and Atom-Ecology share lab-space, the core team consisting of Alan Smith, Russ George, and Martin Moore.

Baoding Sino-US Science and Technology Innovation Park STATUS UNKNOWN - NO RECENT NEWS.

- From public press release in Chinese, there was a partnership between Industrial Heat LLC and this state supported park.
- In the press release, Nickel Hydrogen Energy is clearly named
- Recent suggestion from Dewey Weaver (IH) is that due to IP concerns this relationship has been terminated.

Brillouin Energy. : ACTIVE - Robert Godes: Founder, President and CTO.

- Proprietary Q-Pulse technology based on Ni/H LENR
- Wants to introduce a commercial LENR reactor into the energy market and as of March 2019 seeks further funding to do
 this.
- Engaged with leading scientists and national labs, including Michael McKubre and Francis Tanzella formerly of SRI International to report on developments.
- Carl Page (brother of Alphabet/Google CEO Larry Page) invested in Brillouin Energy and is one of its board members

BLP/Brilliant Light Power Inc. USA :ACTIVE.

- Attracted more than \$75 million of venture capital.
- Claim their devices are not based on LENR, but on "Hydrinos" (shrunken hydrogen atoms)
 - Founded and led by Dr. Randell L. Mills

Chemonuclear Fusion Project ACTIVE (as of Nov 2018) Phil Lang USA

- A crowd funding financed initiative to develop molten lithium fusion.
- Principal: Phil Lang

Clean Nuclear Power LLC: ACTIVE. Lugano-based (Switzerland) start-up developing clean LENR energy.

- Working with LENR Cities Suisse funded by George de Montmollin
- Yogendra Srivastava, Allan Widom

Clean Planet Inc. ACTIVE.

- Co-operates with Japanese government and major Japanese companies/universities. Mixed private/corporate/government funding
- Aims to prototype a commercial LENR/CMNR device.
- Principals: Hideki Yoshino (CEO/Founder) and Masanao Hattori.

Cold Fusion Power International. Russia ACTIVE.

- High energy/fundamental physics laboratories.
- Edward Tsyganov.

Deuo Dynamics Ltd, UK ACTIVE?

- 'Fusion Diode' developers.
- Principals Fabrice David and John Giles.

EarthTech International USA. ACTIVE.

- A privately funded R&D group exploring novel ideas in physics.
- Principals Harold Puthoff, Scott and Marissa Little.

Elforsk Denmark: ACTIVE.

- Research institute funded by Danish energy companies.
- Interests in hydropower and also non-conventional technologies.

Energiforsk (Energy Research Institute) Stockholm, Sweden: ACTIVE.

- Swedish energy industry research institute.
- Principal: Magnus Olofsson

Etiam Oy Finland: BELIEVED DORMANT

- Principal researcher Pekka Soininen
- Research into Rydberg matter, several patents filed.

ENEA Italy, ACTIVE

- National agency for new technologies, energy and sustainable economic development.
- Vittorio Violante.

First Light Fusion. Oxford UK: ACTIVE

- Developing a cavitation process for achieving practical and affordable fusion energy.
- Dr. Nick Hawker and Yiannis Ventikos.

Guangzhou Co-Energy Technology Company Ltd. Lin Xidan China. ACTIVE?

• Engaged in the development of LENR technology.

Global Energy Corporation (GEC): ACTIVE

- Dr. Jay W. Kim, CEO and Chairman
- Dr. Larry Forsley see 'JWK' above, Executive VP and Senior Scientist
- Builds upon 20 years of R&D and product development in conjunction with US Navy SPAWAR (Space and Naval Warfare Command) carried out by Pamela A. Boss, Frank E. Gordon, Stan Szpak and other SPAWAR scientists
- GEC is negotiating 250 MWe and 5 GWe reactors, to be deployed on-site of nuclear power plants using nuclear waste as fuel
- Genie hybrid fusion/fission reactor is claimed to be inherently safe and clean and is powered with used fuel from conventional atomic plants. Under development with NASA support/input.
- Subsidiary **GEC Global LLC** is building conventional power plants (coal, gas, diesel, hydro power, solar, wind, bio, geothermal, and wave energy).

George Washington University. USA: ACTIVE.

- "LENR Energy and Spectroscopy Laboratory". In Washington DC.
- Has a small externally and internally funded research program.
- Contact: David Nagel.

Heliorite AB: Sweden: ACTIVE.

- A private LENR science and technology development company.
- Principal Birger Johannson.

HMRI R&D. USA: ACTIVE

• Founded in NC USA in 2015 Antonia La Gatta and J.T. Vaughan (IH) are directors. Also some possible association with Industrial Heat/ Texas Tech/Seashore Research.

HEAD Hydrogen Engineering Application & Development Company (HEAD) Japan: ACTIVE

- Independent research unit working mainly with Ni/H derived technologies.
- Principal Researcher. Tadahiko Mizuno .

Hydro Fusion Ltd. ACTIVE: Licensees of Rossi/ Leonardo Corporation's LENR devices. Sweden

• Magnus Holm and Hans-Peter Bermin

Hydrobetatron. Italy, ACTIVE.

- Principal Researcher Ubaldo Mastromatteo.
- Allied with ST Microelectronics.

High Mesa Technology USA ACTIVE. Tom Claytor

Provides contract assistance for LENR research experiments.

<u>Iwate University</u> Department of Electrical Engineering and Computer Science Japan ACTIVE.

LENR discovery programme working with Pd-Ni, Pd-Ag and Pd-Li

JWK (USA): ACTIVE. Dr. J.W. Khim

- Government and private test and verification services, developing 'clean nuclear technology'.
- Affiliates include Dr. Larry Forsley. (See also Global Energy Corp.)

JET ENERGY, Inc.: USA: ACTIVE - See also NANORTECH Inc. (below)

- Proprietary technologies to increase the control, rate, and to monitor LENR cells
- Developed LENR metamaterials including the PHUSOR®-type component.
- CMORE Spectroscopy using anti-Stokes detects active state of LENR systems.
- Has created systems coupled to Stirling-cycle heat engines.
- Principal researcher, Mitchell Swartz, USA.

NANORTECH, Inc.: USA:ACTIVE

- NANORTECH, Inc. is a spin-off of JET Energy manufacturing dry preloaded NANOR®-type LENR components.
- Designs/assembles support systems for imaging, monitoring, and driving NANOR®-type LENR components.
- Manufactures unique and custom LENR-active metallic nano-particles.
- LENR cells (NANOR, PHUSOR Etc) using metallic nano-particles.
- Has support from Prof. Peter Hagelstein, MIT. CTO/CEO: Dr. Mitchell Swartz

LD-Brane SRL an R&D company focused on LENR technologies. ACTIVE

Luca Gamberale Italy & Nicolas Chauvin Switzerland.

LENR Cars, Switzerland: Nicholas Chauvin: ACTIVE

• Developing mobile LENR electric generators to power electric vehicles.

LENRGY, Texas USA: ACTIVE

- Principal Thomas Grimshaw
- Consulting/Services company.

LockTherm LLC USA & RUSSIA: ACTIVE

- LockTherm is an Ni-Li-H LENR R&D team.
- Sergei Godin and Andrei Hrischanovich Russia. NB Hrischanovitch may now be working elsewhere.
- Alexander Rios and Victoria Stephens USA

Lattice Energy LLC: ACTIVE

- President and CEO: Lewis Larsen
- Integrated thin-film LENR power devices with high-temperature electrodes as heat source.

Leonardo Corporation. USA – ACTIVE

Business entity marketing Andrea Rossi's (see below) controversial and disputed LENR technologies.

LUX Energy Ltd, Deep River Ventures (DRV): ACTIVE. Affiliates of Industrial Heat/Dewey Weaver.

Seek LENR technologies to license, acquire or invest in.

Mitsubishi Heavy Industries (MHI) Japan: ACTIVE

- Multinational engineering, electrical equipment, and electronics corporation
- Key staff: Shigenori Tsuruga, Kenji Muta, Yutaka Tanaka, Tadashi Shimazu, Koji Fujimori, Takehiko Nishida.

NANORtech: USA ACTIVE

• See JET Energy above.

NeoFire Peter Björkbom Sweden.

Working to develop and market a new energy source based on LENR.

Nickel-Hydrogen Research Center China. STATUS UNKNOWN.

• Located in the Huayan IndustrialPark on the southwest side of Tianjin, China.

Newinflow, Russia, ACTIVE

- The company aggregates the research efforts of disparate scientific groups in Russian universities
- Principal Researchers: Anatoly Klimov, N.Magnitskii & Dr. N.Evstigneev

NUCAT Energy, LLC: ACTIVE

- Prof. David J. Nagel
- Offers consulting services, very much a friend of the field.

Nukey Europe Ltd. UK. ACTIVE

- CEO Angelo Ovidi
- Provides guidance on using LENR technologies to remediate nuclear waste.

Norront Fusion : See Ultrafusion: ACTIVE.

Ooyama Power Inc. Tokyo, Japan: ACTIVE

- Director Ooyama Kazuo
- Established 2004 as JOHO Corp, name changed 2016.
- Presented a "Metal crystal confinement fusion reactor" at a conference in Japan 2019.

Purratio AG: Germany. ACTIVE

- Solfire LENR technologies for the controlled utilization of fusion energy.
- CEO Richard Reichmann

PointSource USA: ACTIVE?

Curt Brown with Pam Boss, Larry Forsley (& Cravens patents)

POWER HEAT ENERGY SRO. Czech Republic. ACTIVE

- Filed patents on Ni-Li-H LENR systems.
- Oleg Olshansky , Emanuel Hubeny (Cz) ; Andrey Kolosov (Ru).

Quantum Potential Corp. State College Pa USA ACTIVE

- R&D in the areas of LENR, fusion, and plasma projects. The company was founded in 2010.
- Principals, Max I. Fomitchev-Zamilov, Alex Kosik

Royal Dutch Shell PLC. Headquartered in the Netherlands: ACTIVE?

• Pd-D Ben van Beurden France.

SAFIRE Electric Sun Project. UK ACTIVE

Plasma-based fusion research – possibly LENR- but possibly not.

Spazionica Italy: ACTIVE

• An R&D focused LENR company working with Ni-H: Francesco Santandrea

SEASHORE RESEARCH USA ACTIVE

- Spun out of Texas Tech, principal LENR researcher Rob Duncan.
- Principal funder Bill & Melinda Gates Foundation.

Swiss OxyHydrogen Energy (SOHO) Switzerland. ACTIVE.

LENR technology developer. Slobodan Stankovic, Gregory Krieger and Richard Anderson.

Southern Utah University (SUU) USA. STATUS UNKNOWN

- SSU has a research program to develop methodologies for characterizing nuclear reactions.
- Principal researcher. Sangho Bok.

Technova (A subsidiary of Toyota MotorCorporation) ACTIVE

LENR R&D leader in providing research grants and advocating for government support.

Tohoku University Japan. ACTIVE.

- A national university housing the Condensed Matter Nuclear Reaction Joint Research Division.
- Yasuhiro Iwamura, Takehiko Itoh and Jirohta Kasagi.
- Collaborates closely with 'Clean Planet'.

TET Laboratory of Experimental Physics Russia ACTIVE

- Experimentalists working to develop devices based on plasma electrolysis, LENR and magnets.
- Andrew Hrischanovich.

TSEM, Italy. ACTIVE

- Antonio La Gatta, founder and president plus Mike McKubre, Irving Dardik
- Focusing on energy, security and healthcare technologies
- Organizer of ICCF-19
- Seems to cooperate with Industrial Heat, MIT, and Texas Tech University

•

Unified Gravity Corporation USA: ACTIVE

Established to prove Hubert and Stephen Lipinski's LENR research.

Ultrafusion/ Norront Fusion: Finland. ACTIVE

- Patent(s) on using YAG-Laser to produce Rydberg hydrogen
- Principals include Leif Homlid and Sindre-Zeiner Gundersen.

LENR INVESTORS

LENR Invest, Switzerland and USA: Tyler van Houwelingen, CEO

- Invested in LENR Cars, Brillouin Energy, Lenuco LLC, NicHenergy
- Sponsor of E-Cat World
- Investments mainly to bridge the gap between lab demonstration and industrial prototype. Also interested in development and cross promotion of compelling LENR related Intellectual Property

Quantum Potential Corporation (QPC) USA

• LENR, fusion, plasma, cavitation technologies. Max Fomitchev-Zamilov

Bill & Melinda Gates Foundation: Close contacts to ENEA via Vittorio Violante

- Observes research in the field via Lowell Wood (who formerly worked with Edward Teller)
- Donated \$6M to 'Seashore Research / Texas Tech (Rob Duncan)

Sunrise Securities, USA

• NYC investment bank cited by Brillouin as an investor.

Industrial Heat LLC, USA.

- An affiliate of <u>Cherokee Investment Partners LLC</u>.
- Their first major investment was in E-cat technology developed by Andrea Rossi. They have since parted company following disputes over IP, money, and verification of the tech.
- Woodford Investment Management LLP (UK) invested many millions of \$ with IH and has an on-going interest in LENR development
- Support a number of research projects in external labs.
- Principal contact Dewey Weaver

Kiva Labs

• Edmund Storms (See also LENRGY) consults for Kiva Labs on LENR research

Carl Page/Anthropocene Institute.

- Brother of Alphabet/Google CEO Larry Page
- Strong supporter of the field, which he knows well
- Invested in **Brillouin Energy** and is one of its board members.

Larry Page CEO Google/Alphabet.

- Recently filed LENR patents and supporting work in the field.
- Working with University of Maryland.

IP Group. London UK.

- Investor in First Light Fusion (see above)
- Primary interest is collaboration with universities to source IP and invest in 'high risk' spin-offs.

Woodford Patient Capital Trust plc. London UK.

- Substantial investors in 'Industrial Heat', see above. One of a number of Neil Woodford's investment funds.
- Principal LENR investment specialist Paul Lamacraft.

LENR Associations

MFMP: Martin Fleischmann Memorial Project Bob Greenyer (Europe), Alan Goldwater (USA) and others. ACTIVE

- Group dedicated to researching LENR while sharing all procedures, data, and results openly online
- Wants to overcome the hurdle of institutional bias by crowd-funding

The International Society for Condensed Matter Nuclear Science (ISCMNS), England. Dr. Bill Collis -Secretary. ACTIVE

- Its stated mission is to promote the understanding, development and application of Condensed Matter Nuclear Science for the benefit of the public
- ISCMNS publishes the peer reviewed Journal of Condensed Matter Nuclear Science (JCMNS).
- Key organiser of LENR conferences in the ICCF series and smaller meetings.

Japan CF Research Society (JCFRS) ACTIVE

• Japanese equivalent of the ISCMNS.

LENR-CANR

- Online library of cold fusion papers and the
- Principal librarian Jed Rothwell

LENRIA: ACTIVE

- The industrial association for LENR -formed to act as promotion and lobbying group
- Founded by Steve Katinsky and David Nagel.
- Principal researchers include Dr. Melvin H. Miles and Dr. M. Ashraf Imam
- Presently involved with LENRIA in Pd-B studies
- https://www.lenria.org/contact-us

Breakthrough Energy Coalition

- Initiative launched in 2015 by **Bill Gates**, John Doerr, Jeff Bezos, George Soros, Mark Zuckerberg, Hasso Plattner, Richard Branson and others.
- Does not name "cold fusion", "LENR" as an investment priority.
- Invests in where governments participate in the initiative 'Mission Innovation' and pushes for "clean energy".

MAJOR COMPANIES ENGAGED IN LENR

- Mitsubishi Heavy Industries, Yasuhiro Iwamura
- Mitsubishi Real Estate. Believed to part- fund Clean Planet Japan

- Toyota / Technova, Akito Takahashi
- Nissan, Nissan/Renault
- Airbus Defence and Space (Possibly not currently)
- Boeing Subsonic Ultra Green Aircraft Research (SUGAR)
- STMicroelectronics (SGS-Thomson), Dr. Ubaldo Mastromatteo
- National Instruments, Dr. James Truchard.
- Siemens (silently)
- Exxon (silently)
- Shell (silently)

SOME EXPERIMENTERS/THEORISTS IN THE LENR - COLD FUSION FIELD

- Akito Takahashi, advisor to 'Clean Planet' Japan
- Alan Smith. Ecalox /Atom Ecology. UK
- Alexander Parkhomov, Russia LENR researcher, experimenter.
- Allan Widom, prof. Northeastern University
- Anatoly Klimov, Russia.(New Inflow). Experimenter, theoretician
- Andrea Rossi, Leonardo Corporation. Experimenter, see 'Leonardo Corp' entry above.
- Andrea Rossi. Experimenter with Ni/Li/H systems and focus of attention over his legitimacy (or otherwise.)
- Andrew Meulenberg. Theoretician
- Anthony LaGatta, TSEM
- Bo Hoistadt: Emeritus Prof. Upsalla University Sweden
- Christy Frazier, Journalist, Infinite Energy magazine
- David Fojt, France. Experimenter.
- David J. Nagel, Professor of Engineering & Applied science George Washington University
- David Wells, NASA LRC, Aeronautical engineer.
- Dennis Letts. USA. Experimenter, theoretician.
- Dr. Andres, Purdue University
- Dr. Bernhard Kotzias: collaborated with Leif Holmlid and worked for Airbus.
- Dr. Brian Ahern, Ames National Laboratory.
- Dr. Christos Stremmenos, University of Bologna, Dept of. Physical and Inorganic Chemistry, retired
- Dr. David Bianchini, University of Bologna
- Dr. Francesco Piantelli, University of Siena, Possibly retired.
- Dr. Francis Tanzella, SRI (now retired from SRI and working independently)
- Dr. Frank Gordon, US Navy's Space and Naval warfare systems (SPAWAR), retired
- Dr. Gerhard Hunf. Independent experimenter and theorist.
- Dr. Giuseppe Levi , University of Bologna
- Dr. Iraj Parchamazad, Chairman of the Chemistry University of LaVerne
- Dr. Joseph Zawodny, NASA senior research scientist Langley Research Center
- Dr. Jurgen Wyttenbach, Switzerland. Theorist.
- Dr. L. Magro, ISPRA, the Institute for Protection and Environmental Research
- Dr. Mace, Los Alamos National Laboratory
- Dr. Michael A Nelson, NASA LENR Space Applications Lead
- Dr. Mike McKubre, SRI (now retired from SRI and working independently)
- Dr. Vladimir Vysotskii, Kiev National University, Head of physics department

- Dr. Yeong E. Kim, professor (physics) Purdue University
- Fabrice David, France
- Francesco Celani, Guest Researcher at INFN Italy.
- Frisone Fulvio University of Catania, Italy. Theorist and Experimenter.
- Gennady Tarrasenko: Independent researcher working 'where geology meets cold fusion;
- George Miley, University of Illinois, Department of Nuclear, Plasma, and Radiological Engineering
- Gustave C. Fralick, Arthur J. Decker, and James W. Blue, NASA Lewis Research
- Hanno Essén, theoretical physicist Swedish Royal Institute of Technology, former chairman Swedish Skeptics Society.
- Hubert Lipinski, Unified Gravity Corp. Experimenter
- Jean-Luc Paillet. Theoretician. France.
- Jed Rothwell: Archivist/Librarian for ISCMNS (See LENR-CANR)
- John Gahl, University of Missouri, Director Material Science Engineering
- Klee Irwin USA Quantum gravity research.
- Lutz Jaitner, LENR plasmoid and ball-lightning researcher. Germany
- Marianne Macy USA Journalist/Author
- Mark Davidson Theorist.
- Mark Prelas, University of Missouri, prof Nuclear Science
- Prof. Koltick, Purdue University
- Prof. Peter Hagelstein, Electrical Engineering, MIT
- Prof. Reifenberger, Purdue University
- Professor Brian Josephson. Nobel laureate, physicist, theorist and experimenter. Cambridge (Trinity) UK.
- Professor Michael Melich, US Navy.
- Professor Violante, ENEA
- Randall Mills. BLP (Black Light Power) Experimenter and theorist working with hydrogen plasma. Refutes links to LENR.
- Robert V. Duncan, Texas Tech University, Vice President for Research
- Ruby Carat USA. Journalist, blogger, podcaster.
- Russ George , Atom Ecology/Ecalox UK
- Simon Brinks. Owner of 'Subtle Atomics' website. Plasma (hydrogen) experimenter/theoretician.
- Stanley Pons, University of Utah & Southampton (retired)
- Stephen Lipinski Unified Gravity Corp. USA Experimenter
- Steve Krivit New Energy Times. Journalist
- Thomas Grimshaw, LENR policy analyst, University of Texas.
- Vittorio Violante. ENEA, Italy. Experimenter, theoretician
- Vladimir Dubinko, Kharkov Ukraine. Physicist, theoretician.
- William Collis Italy, CEO ISCMNS. Theoretician
- Yasuhiro Iwamura, Japan.

SOCIAL/NEWS MEDIA FOCUSED ON LENR

Coldreaction.net: ACTIVE

German language site. Principal: Willi Meinder

Ecat The New Fire: ACTIVE.

• Italian language site mostly devoted to Andrea Rossi's work. Principal: Vessela Nikolova

An Impossible Invention: ACTIVE

• English/Swedish language site mostly devoted to Andrea Rossi's work. Principal: Mats Lewan.

Cold Fusion Times: ACTIVE

US Based site. Principal Dr. Mitchell Swartz.

Atom-Ecology: ACTIVE

English language website focused on cold fusion science. Principal Russ George.

COLDFUSIONNOW. ACTIVE

• US-Based site offering up-to-date news and podcasts on the field. Principal: Ruby Carat.

SIFFERKOLL ACTIVE

English/Swedish language site taking a critical look at LENR financial matters. Principal Torkil Nymerg.

ECAT-NEWS

• Skeptical view of the field.

NEW ENERGY TIMES ACTIVE

Periodical covering the field. Principal Steve Krivit.

MFMP forum (www.quantumheat.org/index.php/en) ACTIVE

• Experimenters website devoted to open science PRINCIPAL : Bob Greenyer.

THINKTANKREPORT.COM:ACTIVE

• US-Based site with extensive commentary on cold fusion and (now and then) ET Life.

LENR.SEPLM.RU: ACTIVE

Busy Russian-language site devoted to CF, also exotic physics of ball lightning etc.

22PASSI: ACTIVE

• Italian language website with some CF content. Principal: Daniel Passerini.

Claudio Pace (http://www.claudiopace.it/) ACTIVE

Italian language website of a well-known researcher.

<u>LENR-Forum.</u> European forum with 8 foreign-language threads. ACTIVE

Coverage of current LENR/CF news and discussion threads on related topics.

20/04/2019. Vers 3.4.