

ICCF10 SESSIONS

In the process of organizing the sessions and the conference, the abstracts suggested a certain organization into the following sessions. The question arose as to whether to organize the sessions in a linear progression, or else to intersperse the different topics. The majority of those that responded to a mailing asking this question indicated that it would be more interested to intersperse topics. This is done in the program. However, it seems reasonable to provide the original sessions themselves in a linear order. This follows below.

Excess heat:

M. Fleischmann, *Background to cold fusion: The genesis of a concept* (oral)

M.H. Miles, *Fluidized Bed Experiments Using Platinum And Palladium Particles In Heavy Water* (oral)

Mitchell R. Swartz and Gayle M. Verner, *Excess heat from low electrical conductivity heavy water spiral-wound Pd/D₂O/Pt and Pd/D₂O-PdCl₂/Pt devices* (oral)

S. Szpak, P. A. Mosier-Boss, J. Dea and F. Gordon, *Polarized D⁺/Pd-D₂O system: Hot spots and mini-explosions* (oral)

J. A. Patterson, J. A. O'Malley, C. E. Entenmann, J. A. Thompson, *Observations of a porous packed bed gaseous deuterium filled mini-reactor* (oral)

M.H. Miles, *A calorimetric investigation of the Pd / B system* (poster*)

Heat systems and applications:

Yoshiaki Arata and Yue Chang Zhang, *Characteristics of compact and practical solid deuterium nuclear fusion reactor* (oral)

Peter Hagelstein, *Thermal to electric energy conversion: Basics, limits, and potential* (poster)

V. A. Romodanov, *Prospects of intensity increase of nuclear reactions at low energy, interaction of hydrogen isotopes, and possible areas of their application* (poster*)

Heat and helium:

M. H. Miles, *Correlation of excess enthalpy and helium-4 production: A review* (oral)

A. De Ninno, A. Frattolillo, A. Rizzo, E. Del Giudice, *⁴He detection in a cold fusion experiment* (oral)

Laser-stimulation and triggering:

Dennis Letts and Dennis Cravens, *Laser stimulation of deuterated palladium: Past and present* (oral)

Dennis J. Cravens and Dennis G. Letts, *Practical techniques in CF research* (oral)

M. McKubre, K. Mullican, F. Tanzella, M. Trevithick and P. Hagelstein, *The need for triggering in cold fusion reactions* (oral)

Edmund Storms, *Use of a very sensitive Seebeck calorimeter to study the Pons-Fleischmann and Letts effects* (oral)

Xing Z. Li, Bin Liu, Qing M. Wei, Nao N. Cai, Jian Tian, Xiong W. Wen, and Dong X. Cao, *Progress in gas-loading D/Pd systems: The feasibility of a self-sustaining heat generator* (oral)

Mitchell R. Swartz, *Photoinduced excess heat from laser-irradiated electrically-polarized palladium cathodes in heavy water* (poster*)

Bin Liu, Xing Z. Li, Lin Yan, and Xiong W. Wen, *Triggering a deuterium flux in Pd wire using electromagnetic field* (poster*)

Robert W. Bass, *Optimal wavelength for laser-induced cold fusion* (poster)

Case experiment and catalyst:

Les Case, *Catalytic fusion of deuterium: Heat output and activation energy from new palladium catalyst* (oral)

Qing M. Wei, Xing Z. Li, and Yan O. Cui, *Excess heat in heavy water--Pd/C catalyst cathode (Case-type) electrolysis at the temperature near boiling point* (oral)

Molten salt approach:

S. A. Tsvetkov, Filatov E. S., and Khokhlov V. A., *Excess heat in molten salts of (LiCl-KCl)+(LiD+LiF) at the titanium anode during electrolysis* (oral)

Transmutation:

G. H. Miley, *Review of transmutation reactions in highly loaded lattice* (oral)

Irina B. Savvatimova, *Transmutation effects in glow discharge hydrogen experiments* (oral)

Ken Shoulders, *Low voltage nuclear transmutation* (poster)

Roberto Monti, *Metallic transmutations induced by acetic acid* (poster*)

John Bockris, *On the history of the discovery of transmutation at Texas A&M* (poster)

Edward Lewis, *The ball lightning state and transmutation* (poster)

Search for Ash:

V. Violante, M. Apicella, F. Sarto, A. Rosada, and E. Santoro, *Search for nuclear ashes in electrochemical experiments* (oral)

Francesco Celani, A. Spallone, P. Marini, V. di Stefano *Thermal and isotopic anomalies when Pd cathodes are electrolysed in electrolytes containing Th-Hg salts dissolved at micromolar concentration in C₂H₅OD/D₂O mixtures* (oral)

Thomas O. Passell, *Pd-110/Pd-108 isotope abundance ratio variations in Pd exposed to high pressure deuterium gas in the hollow cathodes of Arata / Zhang* (oral)

Dan Chicea, *Comment on carbon production in deuterium-metal systems* (poster*)

Dmitriy D. Afonichev, *Ascending diffusion or transmutation* (poster*)

Heat Absorption:

Zhao-Fu Zhang, Wu-Shou Zhang, Min-Qiang Hou, and Zhong-Liang Zhang, *Anomalous heat absorption in closed Pd/D₂O electrolysis systems* (poster*)

Loading and phase:

C. Sibilina, S. Paoloni, E. Castagna, F. Sarto, and V. Violante, *Analysis of nickel hydride thin films after surface plasmon generation by laser technique* (poster*)

Zhong-Liang Zhang *Loading ratios (H/Pd or D/Pd) monitored by the electrode potential* (poster*)

Robert W. Bass, *Metastable deuterium as an ideal cold fusion fuel* (poster*)

Calorimetry and associated issues:

M. Fleischmann, *The "instrument function" of isoperibolic calorimeters; excess enthalpy generation due to the parasitic reduction of oxygen* (oral)

Wilford N. Hansen, *Analysis of calorimetric data obtained using Fleischmann/Pons type electrochemical cells to determine excess heat* (oral)

Wu-Shou Zhang, Min-Qiang Hou, and Zhong-Liang Zhang, *Thermal effects of hydrogen diffusion across metallic tubes* (oral)

Edmund Storms, *How to make a cheap and effective Seebeck calorimeter* (poster*)

Slow Tritium production:

V. A. Romodanov, *Tritium generation at low energy: Interaction of hydrogen isotopes with metals* (oral)

Dmitriy D. Afonichev, *High-frequency radiation and tritium channel* (oral)

Modification of Radioactivity:

J. Dash and D. Chicea, *Effects of hydrogen loading by aqueous electrolysis on radioactivity of uranium* (oral)

Vladimir I. Vysotskii, Alla A. Kornilova, Yuri D. Perfiliev, and Leonid A. Kulikov *The theory and experimental investigation of controlled spontaneous nuclear decay of radioactive isotopes* (oral)

S. A. Tsvetkov *Possibility of using cold fusion for nuclear waste product transmutation* (poster*)

Hal Fox, *Stabilization of high-level, radioactive waste* (poster*)

Vladimir I.Vysotskii, Valerii N. Shevel, Alexander B.Tashirev, and Alla A.Kornilova, *Successful experiments of utilization of high-activity waste in the process of transmutation in growing associations of microbiological cultures* (poster)

Nuclear Emissions:

Steven E. Jones, Frank W. Keeney, and A. Charles Johnson, *Evidence for charged particles emanating from deuterided metal foils* (oral)

F. E. Cecil, H. Liu and C. S. Galovich, *Energetic charged particles from deuterium-metal systems* (oral)

A. S. Roussetski, A. G. Lipson, G. H. Miley, and E. I. Saunin, *Phenomenon of an energetic charged particle emission from hydrogen/deuterium loaded metal* (oral)

R. McIntyre, *Evidence of cold fusion in palladium exposed to atomic deuterium* (oral)

K. A. Kaliev, and J. A. Istomin, *Increase of the output of neutrons in relation to background deuterium containing electrolyte at their electrochemical decomposition – superelectrolytes* (poster)

Intense laser irradiation:

A.S. Roussetski, A.G.Lipson, and V.P. Andreanov *Nuclear emissions from materials, including hydrogen and deuterium, induced by laser beam* (oral)

Plasma loading approach:

S.Narita, H.Yamada, A.Arapi, N.Sato, D.Kato, M.Yamamura, and M.Itagaki, *Gamma ray detection and surface analysis on palladium electrode in DC glow discharge experiment* (oral)

A.G. Lipson, A.S. Roussetski, A.B. Karabut and G.H. Miley, *Strong enhancement of DD-reaction accompanied by X-ray generation in a pulsed low voltage high-current deuterium glow discharge with a Ti-cathode* (oral)

A. B. Karabut, *Production of excess heat power and impurity elements with changed natural ratio of isotopes...* (oral)

Tadahiko Mizuno, Tadashi Akimoto, and Tadayoshi Ohmori, *Generation of heat and products during plasma electrolysis* (oral)

A. B. Karabut and S. A. Kolomeychenko, *Experimental research into characteristics of x-ray emission from solid-state cathode medium of high-current glow discharge* (poster)

A. B. Karabut, *Experimental research into secondary penetrating radiation when interacting x-ray beams of solid laser with various materials targets* (poster)

Cavitation approach:

Roger Stringham, *Cavitation and fusion* (oral)

Andrei G. Lipson, *Neutron yield on the electric breakdown of cavitation bubbles in deuterium-containing matter* (poster*)

Iwamura Effect [Deuterium flux induced +8 nucleon transmutation]:

Yasuhiro Iwamura, Takahiko Itoh, Mitsuru Sakano, and Satoshi Sakai, *Low energy nuclear transmutation in condensed matter induced by D₂ gas permeation through Pd complexes: Correlation between deuterium flux and nuclear products* (oral)

Taichi Higashiyama, H. Miyamaru and A. Takahashi *Replication of the MHI transmutation experiment by D₂ gas permeation through Pd complex* (oral)

H. Yamada, S. Narita, H. Onodera, H. Suzuki, N. Tanaka, T. Nyui and T. Ushirozawa, *Analysis by time-of-flight secondary ion mass spectroscopy for nuclear products in hydrogen penetration through palladium* (oral)

Kasagi Effect [three-deuteron reactions]:

Jirohta Kasagi, *Low-energy nuclear fusion reactions in metals* (oral) [this talk also listed in tunneling session]

G.K. Hubler, C. Cetina, D.L. Knies and K.S. Grabowski, *Report on several ongoing low energy nuclear reaction projects at NRL* (oral)

A. Takahashi, H. Miyamaru, K. Ochiai, Y. Katayama, T. Hayashi, and T. Dairaku, *Studies on 3D fusion reactions in TiDx under ion beam implantation* (oral)

Electronic, Ionic Transport:

Nie Luo, and G. H. Miley, *First-principles studies of ionic and electronic transport in palladium hydride/deuteride* (poster*)

Si Chen, Xing Z. Li *The application of multiple scattering theory in calculating the deuterium flux permeating the Pd thin film* (poster*)

On Theory and Experiment:

Edmund Storms, *What are the conditions required to initiate the LENR effect?* (oral)

Scott R. Chubb and Peter L. Hagelstein, *Metal Deuterides: Theory and Experiment* (poster*)

Robert W. Bass and Michael C. H. McKubre, *Generalized cold fusion demonstration protocol* (poster*)

Tunneling and associated issues:

Jirohta Kasagi, *Low-Energy nuclear fusion reactions in metals* (oral) [also listed in the Kasagi effect session]

A. Kitamura, Y. Awa, T. Minari, A. Taniike and Y. Furuyama, *D(d,p)t reaction rate enhancement in a mixed layer of Au and Pd* (oral)

V.A. Kirkinskii, and Yu. A. Novikov, *Calculations of the nuclear reaction probability in a crystal lattice of titanium deuteride* (oral)

N. Luo, P. J. Shrestha, and G. H. Miley, *Enhancement of nuclear reactions due to screening effects of core electrons* (oral)

Resonant Tunneling approach:

Xiang Zhou, Xing Z. Li, *Bethe's calculation for solar energy and selective resonant tunneling method* (poster*)

Robert W. Bass, *Spectrum of resonant transparency of the Coulomb barrier* (poster*)

Peter Hagelstein, *Models for tunneling through the Coulomb barrier* (poster*)

Preparata theory:

E. Del Giudice, A. De Ninno, A. Frattolillo *Are nuclear transmutations observed at low energies consequences of QED coherence?* (oral)

V. Violante, F. Sarto, E. Santoro, and L. Capobianco, *Study of lattice potentials on low energy nuclear processes in condensed matter* (poster*)

Many-particle cluster theory:

Akito Takahashi, *Mechanism of deuteron cluster fusion by EQPET model* (oral)

Masayuki Ohta, *Analysis of nuclear transmutation induced from metal plus multibody-fusion-products reaction* (poster*)

Poly-neutron theory and experiment:

R.A. Oriani and J.C. Fisher, *Detection of energetic charged particles during electrolysis* (oral)

John C. Fisher, *Theory of low-temperature particle showers* (oral)

R.A. Oriani and J.C. Fisher, *Energetic charged particles detected in the vapor in electrolysis cells* (poster*)

Hideo Kozima, *CF-matter and the cold fusion phenomenon* (poster*)

Roberto Monti, *Neutrons, poly-neutrons, super-heavy stable elements* (poster)

Bose-Einstein Condensate approach:

Yeong E. Kim, David S. Koltick, Ryan Pringer, Jeff Myers, Rhoda Koltick, *Experimental test of Bose-Einstein condensation mechanism for low energy nuclear reaction in nanoscale atomic clusters* (oral)

Yeong E. Kim, David S. Koltick, and Alexander L. Zubarev, *Quantum many-body theory of low energy nuclear reaction induced by acoustic cavitation in deuterated liquid* (poster*)

Ken-ichi Tsuchiya, *Quantum states of deuterons in Pd* (poster*)

Ion band models:

Talbot A. Chubb, *LENR: The cold fusion and transmutation connection* (oral)

Scott R. Chubb, *Nuts and bolts of the ion band state theory* (oral)

Talbot A. Chubb, *LENR: Self-trapping and non self-trapping states* (poster)

Scott R. Chubb, *Impact of Boundary Effects Involving Broken Gauge Symmetry on LENR's* (poster)

Phonon-exchange theory:

Peter Hagelstein, *Unified phonon-coupled $SU(N)$ models for anomalies in metal deuterides* (oral)

Irfan Chaudhary and Peter Hagelstein, *Coherence factors in many-particle three-level systems* (poster*)

Irfan Chaudhary and Peter Hagelstein, *Few-body nuclear wavefunctions* (poster)

Defects:

David J. Nagel and M. Ashraf Imam, *Energetics of defects and isotropic strain in palladium* (oral)

Other models:

Kjeld. C. Engvild and Ludwik Kowalski, *Triple D fusion between deuterons and the nuclei of lattice trapped D₂ molecules* (poster*)

V. A. Romodanov, *Positron annihilation and possible ways of P + D nuclear reactions* (poster*)

F.A. Gareev, Yu.L. Ratis, V.A. Krivitskiy, I.E. Zhidkova, *New type of radioactivity* (poster*)

Stanislav V. Adamenko *Experimental observation and possible way of creation of anomalous isotopes and stable superheavy nuclei via process of electron-nuclear collapse* (poster)

Colin K. Campbell, *The cold fusion phenomenon: A hypothesis* (poster)

Robert W. Bass, *Chief challenge to cold fusion theory?* (poster)

Other Topics:

Eugene F. Mallove, *LENR and “cold fusion” excess heat: Their relation to other anomalous microphysical energy experiments and emerging new energy technologies* (poster)

Hal Fox, *New energy devices reduce atmospheric pollution* (poster)

Alla A.Kornilova, *Experimental observation of fusion of precious metals in growing microbiological associations* (poster)

Website and Journal:

Jed Rothwell and Edmund Storms, *The LENR-CANR.ORG website, its past and future* (oral)

Peter Hagelstein, *On the new electronic journal* (oral)

Research in the area and society:

Scott R. Chubb, *Accountability in research in the cold fusion controversy* (oral)

Ludwik Kowalski, *Cold fusion messages from teachers* (oral)

Edward Lewis, *Cold fusion may be part of a scientific revolution* (oral)

Explanation of (poster*):

In the course of preparing the program, the input that we received indicated that attendees generally felt that it was important to specify whether a paper had been selected as an oral presentation, independent of whether a speaker could make it to the conference.

Consequently, we expect that a small number of the oral papers will not be able to be given due to delays in the visa approval process. We are planning to promote poster papers to be given as oral papers in such cases. Papers that are listed as (poster*) should be considered as candidates for promotion. Authors should communicate to Scott Chubb in these cases, prior to the conference, whether they will be able to give a (poster*) talk as an oral talk at the conference. In this way, there will be a list of such promotable talks available to choose from at the conference.