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Koldamasov ... [et al.]. Description of a sensitive seebeck calorimeter used for cold fusion studies / E. Storms. Some recent results at ENEA / M. Apicella ... [et al.]. Heat measurement during plasma electrolysis / K. Iizumi ... [et al.]. Effect of an additive on thermal output during electrolysis of heavy water with a palladium cathode / Q. Wang and J. Dash. Thermal analysis of calorimetric systems / L. D'Aulerio ... [et al.]. Surface plasmons and low-energy nuclear reactions triggering / E. Castagna ... [et al.]. Production method for violent TCB jet plasma from cavity / F. Amini. New results and an ongoing excess heat controversy / L. Kowalski ... [et al.] -- 3. Transmutation. Observation of surface distribution of products by X-ray fluorescence spectrometry during D [symbol] gas permeation through Pd Complexes / Y. Iwamura ... [et al.]. Discharge experiment using Pd/CaO/Pd multi-layered cathode / S. Narita ... [et al.]. Producing transmutation element on multi-layered Pd sample by deuterium permeation / H. Yamada ... [et al.]. Experimental observation and combined investigation of high-performance fusion of iron-region isotopes in optimal growing microbiological associations / V. I. Vysotskii ... [et al.]. Research into low-energy nuclear reactions in cathode sample solid with production of excess heat, stable and radioactive impurity nuclides / A. B. Karabut. Influence of parameters of the glow discharge on change of structure and the isotope composition of the cathode materials / I. B. Savvatimova and D. V. Gavritenkov. Elemental analysis of palladium electrodes after Pd/Pd light water critical electrolysis / Y. Toriyabe ... [et al.]. Progress on the study of isotopic composition in metallic thin films undergone to electrochemical loading of hydrogen / M. Apicella ... [et al.]. In situ accelerator analyses of palladium complex under deuterium permeation / A. Kitamura ... [et al.]. High-resolution mass spectrum for deuterium (hydrogen) gas permeating palladium film / Q. M. Wei ... [et al.]. ICP-MS analysis of electrodes and electrolytes after HNO[symbol]/H[symbol]O electrolysis / S. Taniguchi ... [et al.]. The Italy-Japan project - fundamental research on cold transmutation process for treatment of nuclear wastes / A. Takahashi, F. Celani and Y. Iwamura -- 4. Nuclear physics approach. Reproducible nuclear emissions from Pd/PdO:Dx heterostructure during controlled exothermic deuterium desorption / A. G. Lipson ... [et al.]. Correct identification of energetic alpha and proton tracks in experiments on CR-39 charged particle detection during hydrogen desorption from Pd/PdO:H[symbol] heterostructure / A. S. Roussetski ... [et al.]. Intense non-linear soft X-ray emission from a hydride target during pulsed D bombardment / G. H. Miley ... [et al.]. Enhancement of first wall damage in ITER type TOKAMAK due to LENR effects / A. G. Lipson, G. H. Miley and H. Momota. Generation of DD-reactions in a ferroelectric KD[symbol]PO[symbol] single crystal during transition through curie point (Tc = 220K) / A. G. Lipson ... [et al.]. Study of energetic and temporal characteristics of X-ray emission from solid-state cathode medium of high-current glow discharge / A. B. Karabut. A novel LiF-based detector for X-ray imaging in hydrogen loaded Ni films under laser irradiation / R. M. Montereali ... [et al.]. Observation and modeling of the ordered motion of hypothetical magnetically charged particles on the multilayer surface and the problem of low-energy fusion / S. V. Adamenko and V. I. Vysotskii -- 5. Material science. Evidence of superstoichiometric H/D lenr active sites and high-temperature superconductivity in a hydrogen-cycled Pd/PdO / A. G. Lipson ... [et al.]. New procedures to make active, fractal-like surfaces on thin Pd wires / F. Celani ... [et al.]. Using resistivity to measure H/Pd and D/Pd loading: Method and significance / M. C. H. McKubre and F. L. Tanzella. Measurements of the temperature coefficient of electric resistivity of hydrogen overloaded Pd

/ A. Spallone ... [et al.]. Magnetic interaction of hypothetical particles moving beneath the electrode/electrolyte interface to elucidate evolution mechanism of vortex appeared on Pd surface after long-term evolution of deuterium in 0.1 m LiOD / H. Numata and M. Ban. Unusual structures on the material surfaces irradiated by low-energy ions / B. Rodionov and I. Savvatimova -- 6. Theory. Context for understanding why particular nanoscale crystals turn-on faster and other LENR effects / S. R. Chubb. Models for anomalies in condensed matter deuterides / P. L. Hagelstein. Time-dependent EQPET analysis of TSC / A. Takahashi. Unifying theory of low-energy nuclear reaction and transmutation processes in deuterated/hydrogenated metals, acoustic cavitation, glow discharge, and deuteron beam experiments / Y. E. Kim and A. L. Zubarev. Catalytic fusion and the interface between insulators and transition metals / T. A. Chubb. Multiple scattering of deuterium wave function near surface of palladium lattice / X. Z. Li ... [et al.]. Theoretical comparison between semi-classical and quantum tunneling effect / F. Frisone. New cooperative mechanisms of low-energy nuclear reactions using super low-energy external field / F. A. Gareev and I. E. Zhidkova. Polyneutron theory of transmutation / J. C. Fisher. The thermal conduction from the centers of the nuclear reactions in solids / K.-I. Tsuchiya. Four-body RST general nuclear wavefunctions and matrix elements / I. Chaudhary and P. L. Hagelstein. Study on formation of tetrahedral or octahedral symmetric condensation by hopping of alkali or alkaline-earth metal ion / H. Miura. Calculations of nuclear reactions probability in a crystal lattice of lanthanum deuteride / V. A. Kirkinskii and Yu. A. Novikov. Possible coupled electron and electron neutrino in nucleus and its physical catalysis effect on D-D cold fusion into helium in Pd / M. Fukuhara. Tunnel resonance of electron wave and force of fluctuation / M. Ban. Types of nuclear fusion in solids / N. Yabuuchi. Neutrino-dineutron reactions (low-energy nuclear reactions induced by D[symbol] gas permeation through Pd complexes - Y. Iwamura effect) / V. Muromtsev, V. Platonov and I. Savvatimova. An explanation of earthquakes by the blacklight process and hydrogen fusion / H. Yamamoto. Theoretical modeling of electron flow action on probability of nuclear fusion of deuterons / A. I. Goncharov and V. A. Kirkinskii.

Sommario/riassunto

"Recent progress in the emerging field of condensed matter nuclear science (CMNS) is presented as a combination of basic nuclear science, energy, nanomaterials science, electro-chemistry and nuclear physics. Key and selected papers from an important conference in this exciting area provide the latest advances in CMNS studies. Current results from cold fusion and condensed matter nuclear science are included."