

**Fusion Studies Laboratory  
Publication List  
2003- Present**

- FSL 873** R. Burton, H. Momota, N. Richardson, Y. Shaban, and G. H. Miley, "Fusion Ship II- A Fast Manned Interplanetary Space Vehicle Using Inertial Electrostatic Fusion", *Space Technology and Applications International Forum - STAIF-2003*, edited by M.S. El-Genk, AIP Conf. Proc., Albuquerque, NM, **654**, pp. 553-562, Feb 2-5 (2003).
- FSL 874** Y. Shaban, and G. H. Miley, "Distributed Power Sources for Mars Colonization", *Space Technology and Applications International Forum - STAIF-2003*, edited by M.S. El-Genk, AIP Conf. Proc., Albuquerque, NM, **654**, pp. 1211-1218, Feb 2-5 (2003).
- FSL 875** G. H. Miley, R. A. Stubbers, and H. Momota, "Advances in Cylindrical IEC Neutron Source Design for Driven Sub-Critical Operation", to be published in the proceedings of *ICONE 11:11<sup>th</sup> Int'l Conf. on Nuc. Engr., Nuclear Energy-Dawn of a New Era*, ICONE 11, Tokyo, Japan, Apr 20-23 (2003).
- FSL 876** G. H. Miley, R. L. Burton, H. Momota, N. Richardson, Y. Shaban, and J. Webber, "Fusion Ship IIa- An Interplanetary Space Vehicle Using Inertial Electrostatic Fusion", *Proceedings of the 39<sup>th</sup> AIAA/ASME/SAE/ASEE Joint Propulsion Conf.-Powered Flight: The Next Century*, Huntsville, Alabama, Jul 20-23 (2003).
- FSL 877** G. H. Miley\*, L. Wu, and H. J. Kim, "IEC-Based Neutron Generation for Security Inspection System", *6<sup>th</sup> Int'l Conf. on Methods and Applications of Radioanalytical Chemistry (MARC VI)*, Kailua-Kona, HI, Apr 7-11 (2003).
- FSL 878** G. H. Miley\*, G. Narne, and T. Woo, "Use of Combined NAA and SIMS Analyses for impurity level Isotope Detection", *6<sup>th</sup> Int'l Conf. on Methods and Applications of Radioanalytical Chemistry (MARC VI)*, Kailua-Kona, HI, Apr 7-11 (2003).
- FSL 879** G. H. Miley, S. O. Kim, N. Luo, A. G. Lipson, and C. Castano, "Characterization of Pd-Ni Thin Film Coated Electrodes for Electrolytic Cell Applications", *International Conf. on Metallurgical Coatings and Thin Films*, San Diego, CA, Apr (2003).
- FSL 880** H. Hora, P Toupa, P. Evans, F. Osman, R. Castillo, K. Mima, M. Murahami, S. Nakai, K. Nishihara, C. Yamanaka, T. Kamanaka, and G. H. Miley, "Laser ICF with Single Event Solution", *11<sup>th</sup> International Congress on Plasma Physics*, Sydney 2002, R. Deward, Editor, Sydney, Australia, Jul 15-19 (2002).
- FSL 881** C. H. Castano Giraldo, "Evidence of Superconductivity in the Magnetic Properties of Specifically Prepared Palladium Hydride and Deuteride Samples (Pd/PdO: H<sub>x</sub> and Pd/PdO: d<sub>x</sub>)", *Master of Science. Thesis, Department of Nuclear, Plasma, and Radiological Engineering, University of Illinois*, Urbana, Illinois (2002).
- FSL 882** H. Hora, G.H. Miley, F. Osman, P. Evans, P. Toups. K. Mima, M. Murakami, S. Nakai, K. Nishihara, C. Yamanaka, and T. Yamanaka, "Single-event High Compression Inertial Confinement Fusion at Low temperatures Compared with Two Step Fast Ignitor", *Journal of Plasma Physics* (2003). – *Further information needed.*
- FSL 883** N. Lou, G.H. Miley, and A. Lipson, "First Principle Studies of Transport Properties for Palladium Thin-films Loaded with Hydrogen", *March Meeting 2003 of the APS*, Vol **1**, p. 300, Austin, TX, Mar 3-7 (2003).
- FSL 884** A. Lipson, A. Bezryadin, C. Castano, and G.H. Miley, "Structure and magnetic properties of PdH<sub>x</sub> nanocomposite, with hydrogen trapped inside dislocation cores", *March Meeting 2003 of the APS*, Vol. **2**, p. 983, Austin, TX, Mar 3-7 (2003).
- FSL 885** G.H. Miley, N. Luo, and A. Lipson, "Proton Transport Through Atomic Layer Coated Thin-films", *March Meeting 2003 of the APS*, vol. **2**, p. 1124, Austin, TX, Mar 3-7 (2003).
- FSL 886** N. Lou, G.H. Miley, and C. Castano, "Deuterium Loading in Palladium Thin-films Prepared by a New Co-deposition Technique", *March Meeting 2003 of the APS*, vol. **2**, p. 1383, Austin, TX, Mar 3-7 (2003).
- FSL 887** G.H. Miley, "New "Spin-Off" Applications as Part of the Development Path for IEC Fusion", *Current Trend in International Fusion Research – Proceedings of the Third Symposium*; edited by E. Panarella.

NRC Research Press, National Research Council of Canada, Ottawa ON K1A 0R6 Canada, pp. 547-558, (1999).

- FSL 888** G.H. Miley and P. J. Shrestha, "On Transmutation Reactions in Solids", *June Meeting 2003 of the ANS*, San Diego, CA, Jun (2003).
- FSL 889** N. Luo and G.H. Miley, "Screening Effects Due to Atomic Charge Distribution", *June Meeting 2003 of the ANS*, San Diego, CA, Jun (2003).
- FSL 890** A. Lipson, G. Miley, and A Roussetski, "Energetic alpha and proton emissions on the electrolysis of thin-Pd films", *June Meeting 2003 of the ANS*, San Diego, CA, Jun (2003).
- FSL 891** G.H. Miley, H. Momota, R. Stubbers, L. Wu, H.J. Kim, and J. Webber, "Experimental Simulation of a Proton Collimator for a Fusion Space Thruster", *NASA/MSFC/JPL/UAH 14<sup>th</sup> Annual Advanced Space Propulsion Workshop (ASPW 2003)*, Huntsville, AL, Apr 15-17 (2003).
- FSL 892** George H. Miley and Heinrich Hora, "Volume Ignition Concepts and Applications by ns-Pulse or PW-ps-Block Ignitor", *FSRC*, La Jolla, CA, Feb (2003).
- FSL 893** G. H. Miley and P. J. Shrestha, "Evidence for Transmutation Reactions in Solids", *Fusion Trends 5th Symp*, Washington, D.C., Mar (2003).
- FSL 894** George H. Miley and Heinrich Hora, "Tritium lean ICF fusion using Block Ignitor and volume ignition", *Fusion Trends 5th Symp*, Washington, D.C, Mar (2003).
- FSL 895** G. H. Miley, "Hydrogen Production Using Thin Film Electrode Electrolysis", *Hydrogen and Fuel Cells 2003 Conf. and Trade Show Vancouver*, British Columbia, Canada, Jun 8-11 (2003).
- FSL 896** George H. Miley, Andrei G. Lipson, and Alexander B. Karabut, "A New Type of Phonon-Driven X-ray Laser", *ICFA*, Oxford, England, July (2003).
- FSL 897** George H. Miley and Andrei G. Lipson, "On a phonon-driven solid-state X-ray Laser", *IFSA*, Monterey, CA, Sept 7-12, (2003).
- FSL 898** George H. Miley and Heinrich Hora, "Volume Ignition by a Plasma Block Ignitor", *Inertial Fusion Sciences Applications*, Editors: B. A. Hammel, et al, pp 418-421, (2003)
- FSL 899** G.H. Miley, N. Luo, H. Hora, A. G. Lipson, "Screening Effects in Low Energy Nuclear Reactions of Importance to Astrophysics" *IEEE Nuclear Science Symposium, paper NS-101*, Portland, Oregon, Oct 19-25, (2003).
- FSL 900** H. Hora, G.H. Miley, L. Cicchitelli, A. Scharmann and W. Scheid, "Nuclear Fusion in Host Lattices discussed by the model of a Nondegenerate Positive Hydrogen Isotope Ion Gas" *Proc. Fifth International Conference on Emerging Nuclear Energy Systems*, Karlsruhe, Germany, Jul 3-6 (1989).
- FSL 901** G.H. Miley, L. Wu, H.J. Kim, "IEC-Based Neutron Generator for Security Inspection System", *Sixth International Conference on Methods and Applications of Radioanalytical Chemistry. MARC VI Kailua-Kona*, Hawaii, Apr 7-11, (2003).
- FSL 902** G.H. Miley, G. Narne, T. Woo, "Use of Combined NAA and SIMS Analyses for Impurity Level Isotope Detection", *Sixth International Conference on Methods and Applications of Radioanalytical Chemistry. MARC VI Kailua-Kona*, Hawaii, Apr 7-11, (2003). *Journal of Radioanalytical and Nuclear Chemistry*, Vol. **263**, pp. 691-696, N0.3, (2005).
- FSL 903** (a) G. H. Miley and P. J. Shrestha, "Review of Transmutation Reactions in Highly Loaded Lattice", *ICCF10*, Cambridge, MA, Aug 24-29 (2003).

(p) G. H. Miley and P. J. Shrestha, “Review of Transmutation Reactions in Solids”, *Proc. ICCF10*, Cambridge, MA, Aug 24-29 (2003).

- FSL 904** G. H. Miley, Nie Luo and P.J. Shrestha, “Enhancement of nuclear reactions due to screening effects of core elements”, *ICCF10*, Cambridge, MA, Aug 24-29 (2003).
- FSL 905** V. Violante, F. Sarto, E. Santoro, L. Capobianco, M. McKubre, F. Tanzella, G.H. Miley, N. Luo and P.J. Shrestha, “Study of Lattice Potentials on Low Energy Nuclear Processes in Condensed Matter”, *ICCF10*, Cambridge, MA, Aug 24-29 (2003).
- FSL 906** G.H. Miley, A.G. Lipson, N. Luo, and A.B. Karabut, “On a Phonon-Driven Solid-State X-ray Laser”, *Inertial Fusion Sciences Applications*, Editors: B. A. Hammel, et al, pp 1074-1076, (2003).
- FSL 907** G.H. Miley and H. Hora, “Volume Ignition by a Plasma Block Ignitor”, *IFSA San Diego Conf.* (2003) in print.
- FSL 908** (a) G.H. Miley, F. Osman, and H. Hora, “Plasma Block Acceleration by PS-TW Irradiation,” *SPIE Ablation*, Taos, NM (2004).
- FSL 909** (a) G.H. Miley, Nie Luo, Andrei Lipson, and A.B. Karabut, “A Unique Plasma Discharge Driven Solid-State X-ray Laser”, *SPIE Ablation*, Taos, NM (2004).
- FSL 910** G.H. Miley, “A New Field of Nuclear Technology – Nuclear Transmutation Reactions in Solids”, *14<sup>th</sup> Pacific Basin Nuclear Conference*, Mar (2004).
- FSL 911** G.H. Miley, H. Momota, R. Stubbers, J. Webber, L. Wu, and H.J. Kim, “Collimator Experiments for IEC-Based Spacecraft Propulsion”, *14<sup>th</sup> Pacific Basin Nuclear Conf.*, Mar (2004).
- FSL 912** G.H. Miley, R. Stubbers, L. Wu, and H. Momota, “An IEC-Driven Sub-Critical Assembly for Teaching Laboratories Offering a New Generation of Sub-Critical Experiments”, *14<sup>th</sup> Pacific Basin Nuclear Conf.*, Mar (2004).
- FSL 913** G.H. Miley, R. Stubbers, Y. Yang, J. Webber, and Y. Shaban, “Advances in IEC Technology for a Portable Neutron/Proton Source”, *14<sup>th</sup> Pacific Basin Nuclear Conf.*, Mar (2004).
- FSL 914** H. Hora and G. H. Miley, “Introductory Remarks to the ‘Edward Teller Lectures’”, *Imperial College Press*, London, pp. 1-18, (2004).
- FSL 915** (a) G.H. Miley, “Small ion driven VUV/UV light sources for laboratory applications”, *Proc. of SPIE*, **5196**, p. 12, Aug 4-6 (2003).
- FSL 916** (a) G.H. Miley and A.G. Lipson, “Intense X-ray emission from highly loaded hydrides”, *Proc. of SPIE*, **5197**, p. 35, Aug 4-6 (2003).
- FSL 917** (a) G.H. Miley and M. Prelas, “Neutron-pumped Excimer Flash Lamp Sources”, *Proc. of SPIE*, **5196**, p. 30, Aug 4-6 (2003).
- FSL 918** B. P. Bromley, “Pressure Sensitivity Studies of an Electrostatic Fusion Neutron Device using a Particle-in-Cell Model”, *Fusion Science & Technology*, **41**, 1, p.24-31, Jan (2002).
- FSL 919** G. H. Miley, R. Stubbers, J. Webber and H. Momota, “Magnetically-Channeled SIEC Array (MCSA) Fusion Device for Interplanetary Missions”, *STAIF 2004*, edited by M.S. El-Genk, AIP Conf. Proc., Vol. **699**, pp. 399-405, Feb 8-11, (2004).
- FSL 920** G. H. Miley, Y. Shaban and Y. Yang, “RF Ion Gun Injector in Support of Fusion Ship II Research & Development”, *STAIF 2004*, edited by M.S. El-Genk, AIP Conf. Proc., Vol **699**, pp. 406-412, Feb 8-11, (2004).

- FSL 921** A. G. Lipson, G. H. Miley, and V. A. Kuznetsov, “Anomalous Neutron Activation and Plastic Deformation of a Copper Cathode during Electrolysis in an ultraweak thermalized neutron field”, *Journal of Radiation Physics and Chemistry*, 69, pp. 7-15, (2004).
- FSL 922** H. Hora, G. H. Miley and F. Osman, “Boltzmann Equilibrium of Endothermic Heavy Nuclear Synthesis in the Universe and a Quark Relation to the Magic Numbers”, *Tucson Conference*, 10-13 March, to be published.
- FSL 923** H. Hora, Y. Cang, X.T. He, J. Zhang, F. Osman, J. Badziak, F.P. Boody, S. Gammino, R. Hopfl, K. Jungwirth, B. Kralikova, J. Kraska, L. Laska, Hong liu, G. H. Miley, P. Parys, H.S. Peng, M. Pfeifer, K. Rohlena, J. Skala, Z. Skladanowski, L. Torrisi, J. Ullschmeid. J. Wolowski, W. Zhang, “Generation of Nonlinear Force Driven Blocks from Skin Layer Interaction of Petawatt-Picosecond Laser Pulses”, *4<sup>th</sup> General Scientific Assembly of Asia Plasma and Fusion Assoc. on New Dev. Of Plasma Phys. and Fusion Tech.* Hangzhou, China, Oct. (2003).
- FSL 924** G.H. Miley, Robert Stubbers, H. Momota, “A Proton Collimator for IEC Fusion Propulsion”, *Final Report for NASA Contract NAS 8-02012*, March (2004).
- FSL 925** G.H. Miley, R. Stubbers, L. Wu, “IEC – Based Generator for Security Inspection System”, *6<sup>th</sup> Int. Meeting on Nuclear App. of Ac. Tech. (AccApp’03)*, San Diego, CA, pp. 924-929, (2003).
- FSL 926** H. Hora, C. Yu, H. Xiantu, Z. Jie, F. Osman, J. Badziak, F.P. Goody, S. Gammino, R. Hopfl, K. Jungwirth, B. Kralikova, J. Kraska, L. Laska, L. Hong, G.H. Miley, P. Parys, P. Hansheng, M. Pfeifer, K. Rohlena, J. Skala, Z. Skladanowski, L. Torrisi, J. Ullschmied, J. Wolowski, Z. Weiyang, “Generation of Nonlinear Force Driven Blocks from Skin Layer Interaction of Petawatt-Picosecond Laser Pulses for ICF”, *Plasma Science and Technology*, Vol 69, No. 1, pp. 2173-2178, (2004).
- FSL 927** H. Hora, G.H. Miley, F. Osman, P. Hammerling, “Fields in Laser Ablated Plasmas Generalized to Degenerate Electrons and to Fermi Energy in Nuclei with Change to Quark-Gluon Plasma”, *Proceedings of the SPIE*, Vol. 5448, pp 1190-1201, (2004).
- FSL 928** G.H. Miley, H. Momota, R. Stubbers, J. Webber, Y. Shaban, R.L. Burton, and N. Richardson, “Collimator Experiments for IEC-Based Spacecraft Propulsion”, *39<sup>th</sup> AIAA/ASME/ASEE Joint Propulsion Conf.*, Huntsville, AL, Jul 20 – 23, (2003).
- FSL 929** A.G. Lipson, V.A. Kuznetsov, and G.H. Miley, “The DD Reaction Yield in the course of Dielectric Breakdown of Cavitation Bubbles in Dielectric Deuterated Liquids”, *Technical Physics Letters*, Vol 30, 5, pp. 415-417, (2004).
- FSL 930** G.H. Miley, P.J. Shrestha, Y. Yang, and R. Thomas, “Electrostatic-Dipole (ED) Fusion Confinement Studies”, *46<sup>th</sup> Annual Meeting of the Div. Of Plasma Physics*, Savannah, GA, Meeting ID DPP04, Nov 15-19, (2004).
- FSL 931** G.H. Miley, Y. Yang, R. Thomas, and D. Froning, “Advancements in Dense Focus (DPF) Operation for Space Propulsion”, *46<sup>th</sup> Annual Meeting of the Div. of Plasma Physics*, Savannah, GA, Meeting ID DPP04, Nov 15-19, (2004).
- FSL 932** Y. Yang, G.H. Miley, A. Lipson, N. Luo, and A. Karabut, “Intense Soft X-ray Production by Plasma Discharge Bombardment of a Deuterated Target”, *46<sup>th</sup> Annual Meeting of the Div. of Plasma Physics*, Savannah, GA, Meeting ID DPP04, Nov 15-19, (2004).
- FSL 933** H. Hora, F. Osman, Y. Cang, J. Badziak, S. Jablonski, S. Glowacz, G.H. Miley, P. Hammerling, J. Wolowski, K. Jungwirth, K. Rohlena, X. He, H. Peng, and J. Zhang, “TW-ps laser driven blocks for light ion beam fusion in solid density DT”, *High-Power Lasers and Applications III, Proc. of SPIE*, vol. 5627, pp 51-64, (2005).
- FSL 934** G.H. Miley, L. Wu, and H. J. Kim, “IEC-based neutron Generator for Security Inspection System”, *Journal of Radioanalytical and Nuclear Chemistry*, Vol. 263, No. 1, pp. 159-164, (2005).
- FSL 935** G.H. Miley, Yang Yang, Linchun Wu, and Hiromu Momota, “Reactor Dynamics Experiments with a sub-Critical Assembly”, *Americans Nuclear Energy Symposium 2004*, FL, Oct. 3-6 (2004).

- FSL 936** A. Lipson, C. Castano, G. Miley, A. Mitin, and B. Lyakhov, “Emergence of a High Temperature Superconductivity in Hydrogen Cycled Pd compounds as an Evidence of a superstoichiometric H/D Sites”, *Proc. ICCF-11*, Marseilles, France, Oct 31 – Nov 5, (2004).
- FSL 937** A. G. Lipson, A. S. Roussetski, G. H. Miley, B. F. Lyakhov, “Energetic Charged Particle Emission from the Hydrogen Loaded Pd and Ti Cathodes and its Enhancement by a He-4 Implantation”, *Proc. ICCF-11*, Marseilles, France, Oct 31 – Nov 5, (2004).
- FSL 938** A.G. Lipson, and G. H. Miley, “Anomalous Neutron Capture and Plastic Deformation of Cu and Pd Cathodes during Electrolysis in a weak Thermalized Neutron Field”, *Proc. ICCF-11*, Marseilles, France, Oct 31 – Nov 5 (2004).
- FSL 939** G.H. Miley, Y. Yang, L. Wu and H. Momota, “Reactor Dynamics Experiments with a Sub-Critical Assembly”, *ANES-Building Bridges to Greater Cooperation*, Miami Beach, FL, Oct 3-6, (2004).
- FSL 940** G.H. Miley, A. Duwel, “Post-Activated Secondary Electron Radio-Isotope MEMS Battery”, *RIMS Kick –Off Meeting*, Arlington, VA, Oct 14-15, (2004).
- FSL 941** H.D. Froning, Jr., G.H. Miley, N. Luo, Y. Yang, H. Momota, E. Burton, “Combining MHD Airbreathing and Fusion Rocket Propulsion for Earth-to-Orbit Flight”, *Space Tech. and App. Int’l Forum – STAIF 2005*, Albuquerque, NM, pp. 1339- 1344, Feb 13-17, (2005).
- FSL 942** R. Thomas, Y. Yang, G.H. Miley, F.B. Mead, “Advancements in Dense Plasma Focus (DPF) for Space Propulsion”, *Space Tech. and App. Int’l Forum – STAIF 2005*, Albuquerque, NM, pp. 536 – 543, Feb 13-17, (2005).
- FSL 943** G.H. Miley, H. Momota, R. Thomas, Y. Takeyama, “Dipole Assisted Inertial Electrostatic Confinement”, *7<sup>th</sup> US – Japan Workshop on Inertial Electrostatic Confinement Fusion*, Los Alamos, NM, Mar 14-16, (2005).
- FSL 944** G.H. Miley, H. Momota and R. Stubbers, “A novel Electric Thruster Based on IEC Plasma Jet Technology” The 2004 International Congress on Advances in Nuclear Power Plants, *Proceedings of ICAPP ’04*, pp. 2234 – 2239, Pittsburgh, PA June 13-17, (2004).
- FSL 945** L. Wu, G. H. Miley and H. Momota “Space-charge neutralization of heavy ion beams via electron injection,” *Proceedings of the 15th International Symposium on Heavy Ion Inertial Fusion HIF*, **544**, 1-2, 21, pp 533-537, May 2005, (2004).
- FSL 946** F. Osman, H. Hora, X.Z. Li, G.H. Miley and J.C. Kelly, “Supporting the Josephson Interpretation of Low Energy Nuclear Reactions and Stabilization of Nuclear Waster”, *American Journal of Applied Science*, Science Publications 2 (6), pp 1049-1057, (2005).
- FSL 947** N. Luo, G.H Miley, “ Hydrogen Peroxide based Fuel Cell for High Energy Density Space Application”, Final Technical Report, Sponsored by DARPA, Issued by U.S Army and Missile Command, August 20, (2004).
- FSL 948** N. Luo, G.H. Miley and A. G. Lipson, “ Modeling of Surface and Bulk Effects in thin-Film PD Cathodes with high Proton Loading”, *Proceedings of Applied Surface Modeling: Experiment, Theory and Simulations* Cleveland, OH, 15 Oct, (2003).
- FSL 949** G. H. Miley, “A FRESH LOOK AT <sup>3</sup>He Sources” Poster Presentation, Fusion Studies Laboratory, University of Illinois, Urbana, USA.
- FSL 950** H. Hora, G.H. Miley, Y. Yang, A.G. Lipson, “A Plasma Bombardment – Metal Hydride Target Soft X-ray Source”, *Plasma Science and Technology, AVS 52<sup>nd</sup> International Symp*, Boston MA, Oct 30 -Nov 4, (2005).
- FSL 951** M.P. Reilly, G.H. Miley and W.A. Hargus Jr., “Plume Expansion and Ionization in a Micro Laser Plasma Thruster,” *41<sup>st</sup> AIAA/ASMA/SAE/ASEE Joint Propulsion Conference & Exhibit*, Tucson AZ, Jul 10-13, (2005).

- FSL 952** A.G. Lipson, A.S. Rusetskii, A.B. Karabut, and G.Miley, “ DD Reaction Enhancement and X Ray Generation in a High-Current Pulsed Glow Discharge in Deuterium with Titanium Cathode at 0.8-2.45kV”, *Journal of Experimental and Theoretical Physics*, Vol. 100, No.6, pp. 1334-1349, (2005).
- FSL 953** N. Luo, P.J Shrestha, G. H. Miley and V. Violante, “ Enhancement of Nuclear Reactions due to Screening Effects of Core electrons”, *Condensed Matter Nuclear Science, Proceeding of the 10<sup>th</sup> International Conference on Cold Fusion*, P. L. Hagelstein and S. R. Chubb (Editors), Royal Sonesta Hotel, Cambridge, MA, USA, Aug 24-29 2003, pp. 687-693, Published December (2005).
- FSL 954** N. Luo and G. H. Miley, “First-Principles Studies of Ionic and Electronic Transport in Palladium Hydride”, *ICCF10 Proceedings*, July 29, (2005).
- FSL 955** L. Wu, G.H Miley and H. Momota, “ Space-Charge Neutralization of heavy ion beams via electron injection”, *Nuclear Instruments and Methods in Physics research*, Proceedings Of The International Symposium On Heavy Ion Inertial Fusion, NJ, June 7-11, p533-537(2004).
- FSL 956** H. Hora, G.H Miley, X.Z Li, J.C Kelly and F. Osman, “Low-Energy Nuclear Reactions Resulting As Picometer Interactions With Similarity To K-Shell Electron Capture”, *Eleventh International Conference On Condensed Matter Nuclear Science*, France, (2004).
- FSL 957** H. Hora, G. H. Miley and F. Osman, “Debye sheath of laser produced plasmas generalized to the quark-gluon plasma and high energy density physics”, *4<sup>th</sup> International Conference Inertial Fusion Science and Applications*, Biarritz, 4-9 Sept. (2005). *J. Phys. IV France 133 pp1047-1050 (2006)*
- FSL 958** H. Hora, J. Badziak, S. Glowacz, J. Wolowski, F. Osman, Y. Cang, J. Zhang, H. Peng, X. He, G. H. Miley, K. Jungwirth, K. Rohlena, and J. Ullschmied “Plasma blocks from nonlinear force generated skin layer acceleration for ignition of a fusion flame in nearly uncompressed solid DT”, *4<sup>th</sup> International Conference Inertial Fusion Science and Applications*, Biarritz, 4-9 Sept. (2005). *J. Phys. IV France 133 pp219-222 (2006)*
- FSL 959** H. Hora, G.H. Miley, J. Badziak, and J. Zhang, “Ignition of a Fusion Flame in DT by Nonlinear Force Driven Plasma Blocks at PW-ps Laser Irradiation”, *APS DPP Meeting*, Denver, Oct. (2005).
- FSL 960** H. Hora, G.H. Miley, J. Badziak, and J. Zhang, “Debye Layers in Plasmas Generalized to Hadron confinement of Nuclei and Quark-Gluon-Plasmas”, *APS DPP Meeting*, Denver, Oct. (2005).
- FSL 961** R. Thomas, G.H. Miley, and F. Mead, “An Investigation of Bremsstrahlung Radiation in a Dense Plasma Focus (DPF) Propulsion Device”, *Symposium on Space Nuclear Power and Propulsion (STAIF)* (2006).
- FSL 962** G.H. Miley, Nie Luo, Prajakti J. Shrestha, Richard Gimlin, Rodney Burton, John Rusek, Frank Holcomb, “H<sub>2</sub>O<sub>2</sub>Based Fuel Cells for Space Power Systems”, *AIAA International Energy Conversion*, San Francisco, August (2004).
- FSL 963** G.H. Miley, L. Wu, H. Momota, H. Kim, “Study of Ion Stripping and Charge Exchange for Heavy Ion Fusion”, *IEEE Symposium on Fusion Engineering*, Knoxville, Tennessee, September 26-29, (2005).
- FSL 964** G.H. Miley, N. Luo, J. Mather, E. Byrd, G. Hawkins, L. Gu, A. Nayak, R. Burton and P. J. Shrestha, “Optimization of the H<sub>2</sub>O<sub>2</sub>-NaBH<sub>4</sub> Regenerative Fuel Cell for Space Power Applications Using FEMLAB Modeling”, *FEMLAB Conference*, Boston, MA, Oct 23-25 (2005).
- FSL 965** G.H. Miley and H. Hora, “ Comments about New Book on Edward Teller Medal Award Lectures on Laser and Inertial Fusion Energy”, *ANS Fusion Energy Division December 2005 Newsletter* (2005)
- FSL 966** H. Hora, J. Badziak , J. Zhang, G.H. Miley, W. Zhang, H. Peng, X. He, S. Glowacz, S. Jablonski, J. Wolowski, Z. Skladanowski, F. Osman, Yu Cang, S. Sana, M.N. Read, K. Jungwirth, K. Rohlena, J. Ullschmied “Fast Ignition by Laser Driven Particle Beams of Very High Intensity”, *21<sup>st</sup> IAEA Fusion Energy Conference*, Oct 16-21, Chengdu, China (2006)

- FSL 967** A. Lisbon, B. Heuser, C. Castano, G. Miley, B. Lyakhov, and A. Mitin “Transport and Magnetic Anomalies below 70 K in a Hydrogen-cycled Pd Foil with a Thermally Grown Oxide”, *Physical Review B* 72, 212507, Dec 13, (2005),
- FSL 968** N. Luo, G.H. Miley, P.J. Shrestha, R. Gimlin, R. Burton, G. Hawkins, J. Mather, J. Rusek, F. Holcomb, “H<sub>2</sub>O<sub>2</sub> Fuel Cells for Air-Independent Power Systems”, *Proceeding of 8<sup>th</sup> International Hydrogen Peroxide Propulsion Conference*, Sept 18-21 (2005), Purdue University, W. Lafayette, IN, USA.
- FSL 969** G. H. Miley, H. Hora, F. Osman, Y. Yang, L. Wu, H. Momota, and X. Z. Li “ Low Cost Long Distance Detector for Explosives and Chemical Analysis by IEC Application”, *American journal of Applied Sciences* 2, (2): xx-xx, 2005 Science publications
- FSL 970** G. H. Miley, and P. J. Shrestha, “Review of Transmutation Reactions in Solids”, *Condensed Matter Nuclear Science, Proceeding of the 10<sup>th</sup> International Conference on Cold Fusion*, P. L. Hagelstein and S. R. Chubb (Editors), Royal Sonesta Hotel, Cambridge, MA, USA, 24-29 Aug 2003, pp. 361-378, Published December (2005).
- FSL 971** N. Luo, G.H. Miley, J. Mather, R. Burton, G. Hawkins, R. Gimlin, J. Rusek, T. Valdez, and S.R. Narayanan, “NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cell for Lunar and Mars Exploration”, *AIP Conference Proceedings, STAIF 2006*, 813, pp 209-221, Albuquerque, New Mexico, February 12-16 (2006).
- FSL 972** G. H. Miley, H. Momota, P.J. Shrestha, R. Thomas, and Y. Takeyama, “ Space Propulsion Based on Dipole Assisted IEC System”, *AIP Conference Proceedings, STAIF 2006*, 813, pp 1240-1248, Albuquerque, New Mexico, February 12-16, (2006).
- FSL 973** S.D. Knecht, R. E. Thomas, F. B. Mead, G. H. Miley, and D. Froning, “Propulsion and Power Generation Capabilities of a Dense Plasma Focus (DPF) Fusion system for future Military Aerospace Vehicles”, *AIP Conference Proceedings, STAIF 2006*, 813, pp 1232-1239, Albuquerque, New Mexico, February 12-16, (2006).
- FSL 974** N. Luo, G.H. Miley, J. Mather, R. Burton, G. Hawkins, E. Byrd, F. Holcomb, J. Rusek, “A kW-Class NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cell for Air Independent Propulsion”, *ASME*, Irvine, CA, June 19-21 (2006).
- FSL 975** G.H. Miley, N. Luo, J. Mather, R. Burton, G. Hawkins, L. Gu, E. Byrd, R. Gimlin, P.J. Shrestha, G. Benavides, J. Laystrom, D. Carroll, “Direct NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cell”, *IBC Conference, to be published in J. of P. Sources*.
- FSL 976** G.H. Miley, N. Luo, J. Mather, E. Byrd, R. Burton, G. Hawkins, R. Gimlin, G. Kopec, P.J. Shrestha, G. Benavides, J. Laystrom, J. Rusek, T. Valdez, S. Narayanan, “Compact High-Power-Density Direct NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cells”, *Small Fuel Cells for Portable Applications, 7<sup>th</sup> Edition Proceedings*, pp. 23-40, “Questions and Answers” pp. 41-43, Washington, D.C., April 2-4 (2006).
- FSL 977** G. H. Miley, N. Luo, R. Burton, P. J. Shrestha, “Development of “Family” of Hydrogen Peroxide Fuel Cells”, *Small Fuel Cells Conf.*, Washington, D.C., April 27-29 (2005).
- FSL 978** H. Hora, J. Badziak, G.H. Miley, F. Osman, “Application of High Current Density Ions from PW-ps Laser Pulse Nonlinear Force Driven Plasma Blocks for X-ray Lasers”, *European Physics Society, June Meeting*, London UK (2004).
- FSL 979** H. Hora, F. Osman, J. Badziak, F. P. Boody, Y. Cang, S. Gammino, X. T. He, R. Höpfl, K. Jungwirth, B. Kralikova, J. Kraska, L. Laska, Hong Liu, G.H. Miley, P. Parys, H.S. Peng, M. Pfeifer, K. Rohlena, J. Skala, Z. Skladanowski, L. Torrissi, J. Ullschmied, J. Wolowski, J. Zhang, W. Zhang, “High Density Particle Beams Driven by Petawatt-Picosecond Clean Laser Pulses for Fusion”, *European Physics Society, June Meeting*, London UK (2004).
- FSL 980** H. Hora and G. H. Miley, “Low Cost Fusion Energy Based on a new Laser-Driven Fast Igniter Scheme”, *15<sup>th</sup> PBNC*, Sydney Australia, 15-20 Oct, (2006).

- FSL 981** G. H. Miley, R. Thomas, Y. Takeyama, L. Wu, I. Percel, H. Momota, H. Hora, X. Z. Li and P.J. Shrestha, “Driven Subcritical Fission Research Reactor Using a Cylindrical Inertial Electrostatic Confinement Neutron Source”, 15<sup>th</sup> PBNC, Sydney Australia, 15-20 Oct, (2006).
- FSL 982** G.H. Miley, J. Badziak, S. Glowacz, S. Jablonski, J. Wolowski, H. Hora, P.X. Hammerling, F. Osman, Y. Cang, X. He, H. Peng, J. Zhang, K. Jungwirth, K. Rohlena, J. Ullschmied, “Ablation of Non-linear Force Driven Plasma Blocks for Fast Igniter Applications”, SPIE, Taos, NM, 7-11 May (2006).
- FSL 983** E.Byrd, “Modeling a Sodium Borohydride and Hydrogen Peroxide Fuel Cell Using Comsol Multiphysics”, Master of Science Thesis, *Department of Electrical and Computer Engineering*, University of Illinois, Urbana, Illinois (2006).
- FSL 984** N. Luo, G. H. Miley, J. Mather, R.Burton, G. Hawkins, E. Byrd, F. Holcomb, and J. Rusek, “A KW-Class NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cell for Air Independent Propulsion”, 4<sup>th</sup> International Conference on FUEL CELL SCIENCE, ENGINEERING and TECHNOLOGY, June 19-21, Irvine, CA (2006)
- FSL 985** N. Luo, “A KW-Class NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cell for Aerospace Power Systems” 4<sup>th</sup> International Energy Conversion Engineering Conference and Exhibit (IECEC), June 26-29, San Diego, CA 2006
- FSL 986** G.H. Miley, L. Wu, “PIC-MCC code Development”, Final report,
- FSL 987** H. Hora, G.H. Miley, “Upgraded Reactor for Electrostatic confined Nuclei”, German patent application submitted by FAX 11 April , 2001, US Patent application number 10/123,094, 11 April 2002
- FSL 988** F. Osman, J. Badziak, H. Hora, G. H. Miley, and H. Peng, International Workshop on “Fast High Density Plasma Blocks Driven by Picosecond Terawatt Lasers”, University of Western Sydney, Australia, 1-4 December 2004
- FSL 989** G.H. Miley, H. Hora, J. Badziak, K. Rohlena, K. Jungwirth, J. Wolowski, Y. Cang, X. He , J. Zhang, and P. Hammmerling, “ Plasma block acceleration by ps-TW laser irradiation”, Proceedings of SPIE vol. 5448 pp 973-986 ,SPIE, Belingham, WA, 2004
- FSL 990** G. H. Miley, “Nuclear Fusion,” Standard Handbook for Electrical Engineers, (Fifteenth Edition, McGraw-Hill, Inc.,) section 5.4 (2007).
- FSL 991** G. H. Miley, "Nuclear Power for the Future," Standard Handbook for Electrical Engineers, (Fifteenth Edition, McGraw-Hill, Inc.,) section 5.3 (2007).
- FSL 992** G. H. Miley, “Nuclear Power Plants “Standard Handbook for Electrical Engineers, (Fifteenth Edition, McGraw-Hill, Inc.,) section 5.2 (2007).
- FSL 993** G.H. Miley, E. D. Bryd, “ Use of COMSOL Multiphysics for Optimization of an All Liquid PEM Fuel Cell MEA”, Proceedings of COMSOL Users Conference 2006, Edited by Jeri’ Ann Hiller, pp.207-213, Boston (2006)
- FSL 994** H.J. Kim, “ Instability Studies on A Spherical Inertial electrostatic Confinement”, Dissertation Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nuclear, Plasma, and Radiological Engineering in the Graduate School of the University of Illinois, Urbana, Illinois (2006).
- FSL 995** G. H. Miley, H. Leon, G. Kopec, J. Mather, “Brown Gas Study at UIUC Using George Wiseman's Machines” (2006)
- FSL 996** M. P. Reilly, “Investigation of Plume Expansion and target Surface Characteristics of a Micro Laser Plasma Thruster for Satellite Application”, Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Nuclear Engineering in the Graduate College of the University of Illinois, Urbana-Champaign, 2005
- FSL 997** G. H. Miley, G.G. Hawkins, J. A. Englander, “ Use of COMSOL to Model the Flow Field of an All Liquid PEM Fuel Cell MEA”, COMSOL Users Conference, Boston (2006)



- FSL 998** L. Wu, H. Momota, G. H. Miley, “Cross Section for Charge Exchange and Ionization of High Energy Ions in Noble Gases”, Bulletin of the American Physical Society Vol.51 No.7 Abstract: NO2.00015, the 48<sup>th</sup> Annual Meeting of the Division of Plasma Physics, Philadelphia, Pen., 2006
- FSL 999** G. H. Miley, “ Controlled Filament Non-Local Discharge(CFND)”, Bulletin of the American Physical Society Vol.51 No.7 Abstract: ZP1.00050, 48<sup>th</sup> Annual Meeting of the Division of Plasma Physics, Philadelphia, Pen., 2006
- FSL 1000** G. H. Miley, A. Lipson, and H. Hora, “ Coherent X-Ray Emission from a Plasma Discharge-Driven Hydride Target”, Bulletin of the American Physical Society Vol.51 No. 7 Abstract: BO1.00004, 48<sup>th</sup> Annual Meeting of the Division of Plasma Physics, Philadelphia, Pen., 2006
- FSL 1001** G. H. Miley, R. Thomas, Y. Takeyama, L. Wu, I. Percel, H. Momota, H. Hora, X. Z. Li, and P.J. Shrestha, “Driven Subcritical Fission Research Reactor Using a Cylindrical Inertial Electrostatic Confinement Neutron Source”, 15<sup>th</sup> Pacific Bain Nuclear Conference, Sydney 2006.
- FSL 1002** H. Hora, G. H. Miley, “Low Cost Fusion Energy Based on a New Laser-Driven Fast Igniter Scheme”, 15<sup>th</sup> Pacific Bain Nuclear Conference, Sydney 2006.
- FSL 1003** H. Froning, G. H. Miley, “Aneutronic Fusion Research and Development for Future Aerospace Power and Population Needs”, 15<sup>th</sup> Pacific Bain Nuclear Conference, Sydney 2006.
- FSL 1004** J. Lee, “MEMS Radioisotope Battery with High Vacuum Insulation”, Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Nuclear Engineering in the Graduate College of the University of Illinois, Urbana-Champaign, 2007.
- FSL 1005** L. Gu, “Cathode Electrocatalyst Selection and Catalyst Deposition for a Direct Borohydride/Hydrogen Peroxide Fuel Cell”, Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Nuclear Engineering in the Graduate College of the University of Illinois, Urbana-Champaign, 2006
- FSL 1006** G. H. Miley and P. J. Shrestha, “Overview of Light Water/Hydrogen-based Low Energy Nuclear Reactions” , LENR-CANR.org library, The 12<sup>th</sup> International Conference on Cold Fusion, Nov 27-Dec 3, 2005, Condensed Matter Nuclear Science, eds Akito Takahashi, Ken-ichiro Ota & Yasuhiro Iwamura , World Scientific Publishing Company, Imperial College Press, December 2006.
- FSL 1007** G. H. Miley, “Meeting Report Small Fuel Cells 2006 Washington, D.C”, Advanced Fuel Cell Technology, Vol. 10 No. 5 p. 9, May 2006
- FSL 1008** G.H. Miley, N. Luo, J. Mather, R. Burton, G. Hawkins, L. Gu, E. Byrd, R. Gimlin, P.J. Shrestha, G. Benavides, J. Laystrom, D. Carroll, “Direct NaBH<sub>4</sub>/H<sub>2</sub>O<sub>2</sub> Fuel Cells”, J. of Power Sources 165 (2007) 509-516
- FSL 1009** F. Osman, H. Hora, G. H. Miley, and J. C. Kelly, “New Aspects for Low Cost Energy by Inertial Fusion Using Petawatt Lasers”, Australian Institute of Physics 17<sup>th</sup> National Congress 2006, Brisbane, Dec. 3-8, 2006
- FSL 1010** L. Wu, H. Momota, G. H. Miley, “ Cross Sections for Charge Exchange and Ionization of High Energy Ions in Noble Gases”, Bulletin of the American Physical Society Vol.51 No. 7 Abstract: NO2 15, 48<sup>th</sup> Annual Meeting of the Division of Plasma Physics, Philadelphia, Pen., 2006
- FSL 1011** G. H. Miley, L. Wu, T. Dolan, H. Momota, and P.J. Shrestha, “Line Source of Neutrons/X-rays Based on a Unique Cylindrical IEC Fusion Device”, Innovative Confinement Concepts Workshop, U. of Maryland, Feb. 2007
- FSL 1012** G. H. Miley, and H. Hora, “Accelerated Plasma Blocks Driven by Petawatt-Picosecond Laser Pulses for Igniting Near Solid Density DT”, Innovative Confinement Concepts Workshop, U. of Maryland, Feb. 2007

- FSL 1013** G. H. Miley, L. Wu, T. Dolan, H. Momota, and P.J. Shrestha, “A Broad Coverage Neutron Source for Security Inspections”, Innovative Confinement Concepts Workshop, U. of Maryland, Feb. 2007
- FSL 1014** H. Hora, G. H. Miley, “Maruhn-Greiner Fission Theory and Low Energy Nuclear Reactions with Magic Numbers”, APS, 2007
- FSL 1015** G. H. Miley, H. Hora, A. Lipson, N. Luo, J. Shrestha, “Future Power Generation by LENR with Thin-Film Electrodes” ACS, Chicago, March 29, 2007
- FSL 1016** J. R. Lee, G. H. Miley, N. Luo, and M. Ragheb, “Radioisotopic Battery with Vacuum Electrical Insulation”, 5<sup>th</sup> International Energy Conversion Engineering Conference, St. Louis, June 25-28 2007
- FSL 1017** J. Lee. “MEMS Radioisotopic Battery Cell with High Vacuum Insulation” Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Nuclear Engineering in the Graduate College of the University of Illinois, Urbana-Champaign, 2007
- FSL 1018** L. Gu, N. Luo, and G. H. Miley, “Cathode Electrocatalyst Selection and Deposition for a direct Borohydride/Hydrogen Peroxide Fuel Cell”, J. of Power Sources (date to confirm)
- FSL 1019** G. H. Miley and L. Wu, “Magnetically-Channeled IEC Trap Array Fusion Device for Interplanetary Missions”, Proceedings of Space Nuclear Conference Boston, Massachusetts, 2007
- FSL 1020** M. Romer, G. H. Miley, N. Luo, and R. Gimlin, “Ragone Plot Comparison of Radioisotope Cells and the Direct Sodium Borohydride/Hydrogen Peroxide Fuel Cell with Chemical Batteries”, IEEE Transactions on Energy Conversion 2006
- FSL 1021** G. H. Miley, G. Hawkins, J. Englander, “Development of a Coupled 2D-3D Fuel Cell Model for Flow Field Analysis”, COMSOL Users Conference, Boston (2006)
- FSL 1022** N. Luo, G.H. Miley, “Regenerative Peroxide ( $NaBH_4/H_2O_2$ ) Fuel Cell for Space Power Systems”, DARPA/APRL SBIR Phase II Progress TIM Review (May 2007).
- FSL 1023** T. Hayamizu, “Studies of Transport in Field-Reversed Configuration”, Independent Study, May 2007.
- FSL 1024** G. H. Miley, “IEC History and Future Directions”, US-Japan IEC Workshop on Small Plasma and Accelerator Neutron Sources, Argonne, IL, May 22-24, 2007.
- FSL 1025** H. Momota, L. Wu, T. Hayamizu and G. H. Miley, “A Counter Stream Beam D-D Neutron Generator”, US-Japan IEC Workshop on Small Plasma and Accelerator Neutron Sources, Argonne, IL, May 22-24, 2007.
- FSL 1026** T. Hayamizu, “Stabilization of Counter Beam Plasma Column”, US-Japan IEC Workshop on Small Plasma and Accelerator Neutron Sources, Argonne, IL, May 22-24, 2007.
- FSL 1027** T. Hayamizu, R.E. Thomas, I. Parcel, H. Momota, and G. H. Miley, “Dipole-Assisted IEC”, US-Japan IEC Workshop on Small Plasma and Accelerator Neutron Sources, Argonne, IL, May 22-24, 2007.
- FSL 1028** L. Wu, H. Momota, T. Hayamizu and G. H. Miley, “Atomic Processes in a R-F Discharge Deuterium Ion Source”, US-Japan IEC Workshop on Small Plasma and Accelerator Neutron Sources, Argonne, IL, May 22-24, 2007.
- FSL 1029** G. H. Miley, and L. Wu, “Magnetically-Channeled IEC Trap Array Fusion Device for Interplanetary Missions”, Space Nuclear Conference 2007, Boston, MA, June 24-28 2007
- FSL 1030** H. Léon, G. Kopec, G. H. Miley, G. Draney, L. Wu, “STUDIES OF PERFORMANCE OF BROWN-TYPE STACK FOR ELECTROLYTIC CELL PRODUCTION OF HYDROGEN”, Safety and Technology of Nuclear Hydrogen Production, Control, and Management Boston, Ma, June 24-28 2007

- FSL 1031** S. Lux, G. Kopec, L.Gu, N. Luo, and G. H. Miley, “Water Mangment Issues for Direct Borohydride/Peroxide Fuel Cells”, Proceedings of 5<sup>th</sup> International Conference on Fuel Cell Science, Engineering, and Technology 2007, p 56
- FSL 1032** G. H. Miley, E. Byrd, Li.Gu, G. Kopec, and N. Luo, “ Simulation Modeling for Optimization of an All Liquid PEM Fuel Cell”, Proceedings of 5<sup>th</sup> International Conference on Fuel Cell Science, Engineering, and Technology 2007, p. 64
- FSL 1033** G. H. Miley, M. Romer, A. Duel, and R. Gimlin, “Ragone Plot Comparison of and the Direct Sodium Borohydride/Hydrogen Peroxide/Fuel Cell with Chemical Batteries and Radioisotope”, Proceedings of 5<sup>th</sup> International Conference on Fuel Cell Science, Engineering, and Technology 2007, p. 310
- FSL 1034** N. Luo, G. Kopec, L. Gu, E. Byrd, R. Bernas and S. Lux, “ Optimization Studies of a NaBH<sub>4</sub>/h<sub>2</sub>o<sub>2</sub> FEM Fuel Cell “, Fourth Annual Fuel Cell Technology and Business Conference & Exhibition, Rochster, N.Y. June 14-15, 2007
- FSL 1035**
- FSL 1036**