

**BlackLight Power, Inc. Publications:
Journals, Proceedings and Book**

1. R. Mills, P. Ray, B. Dhandapani, W. Good, P. Jansson, M. Nansteel, J. He, A. Voigt, "Spectroscopic and NMR Identification of Novel Hydride Ions in Fractional Quantum Energy States Formed by an Exothermic Reaction of Atomic Hydrogen with Certain Catalysts," European Physical Journal: Applied Physics, Vol. 28, (2004), pp. 83–104.
2. J. Phillips, R. L. Mills, X. Chen, "Water Bath Calorimetric Study of Excess Heat in 'Resonance Transfer' Plasmas," J. Appl. Phys., Vol. 96, No. 6, (2004), pp. 3095–3102.
3. R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, W. Good, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Am. Chem. Soc. Div. Fuel Chem. Prepr., Vol. 49, No. 2, (2004).
4. R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Synthesis of HDLC Films from Solid Carbon," J. Mater. Sci., Vol. 39 (2004), pp. 3309–3318.
5. R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Am. Chem. Soc. Div. Fuel Chem. Prepr., Vol. 49, No. 1, (2004).
6. R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, "Characterization of an Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Am. Chem. Soc. Div. Fuel Chem. Prepr., Vol. 48, No. 2, (2003).
7. R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Spectroscopic Characterization of the Atomic Hydrogen Energies and Densities and Carbon Species During Helium-Hydrogen-Methane Plasma CVD Synthesis of Diamond Films," Chemistry of Materials, Vol. 15, (2003), pp. 1313-1321.
8. R. L. Mills, P. Ray, "Extreme Ultraviolet Spectroscopy of Helium-Hydrogen Plasma," J. Phys. D, Applied Physics, Vol. 36, (2003), pp. 1535-1542.
9. R. L. Mills, X. Chen, P. Ray, J. He, B. Dhandapani, "Plasma Power Source Based on a Catalytic Reaction of Atomic Hydrogen Measured by Water Bath Calorimetry," Thermochimica Acta, Vol. 406/1-2, (2003), pp. 35-53.
10. R. L. Mills, B. Dhandapani, J. He, "Highly Stable Amorphous Silicon Hydride," Solar Energy Materials & Solar Cells, Vol. 80, No. 1, (2003), pp. 1-20.
11. R. Mills, P. Ray, R. M. Mayo, "The Potential for a Hydrogen Water-Plasma Laser," Applied Physics Letters, Vol. 82, No. 11, (2003), pp. 1679-1681.
12. R. L. Mills, P. Ray, "Spectroscopic Characterization of Stationary Inverted Lyman Populations and Free-Free and Bound-Free Emission of Lower-Energy State Hydride Ion Formed by a Catalytic Reaction of Atomic Hydrogen and Certain Group I Catalysts,"

- Journal of Quantitative Spectroscopy and Radiative Transfer, No. 39, sciencedirect.com, April 17, (2003).
13. R. L. Mills, P. Ray, "Stationary Inverted Lyman Population Formed from Incandescently Heated Hydrogen Gas with Certain Catalysts," J. Phys. D, Applied Physics, Vol. 36, (2003), pp. 1504-1509.
 14. R. Mills, P. Ray, R. M. Mayo, "CW HI Laser Based on a Stationary Inverted Lyman Population Formed from Incandescently Heated Hydrogen Gas with Certain Group I Catalysts," IEEE Transactions on Plasma Science, Vol. 31, No. 2, (2003), pp. 236-247.
 15. R. L. Mills, P. Ray, J. Dong, M. Nansteel, B. Dhandapani, J. He, "Spectral Emission of Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," Vibrational Spectroscopy, Vol. 31, No. 2, (2003), pp. 195-213.
 16. R. L. Mills, P. Ray, B. Dhandapani, J. He, "Comparison of Excessive Balmer α Line Broadening of Inductively and Capacitively Coupled RF, Microwave, and Glow Discharge Hydrogen Plasmas with Certain Catalysts," IEEE Transactions on Plasma Science, Vol. 31, No. 3 (2003), pp. 338-355.
 17. H. Conrads, R. Mills, Th. Wrubel, "Emission in the Deep Vacuum Ultraviolet from a Plasma Formed by Incandescently Heating Hydrogen Gas with Trace Amounts of Potassium Carbonate," Plasma Sources Science and Technology, Vol. 12, (2003), pp. 389-395.
 18. R. L. Mills, J. He, P. Ray, B. Dhandapani, X. Chen, "Synthesis and Characterization of a Highly Stable Amorphous Silicon Hydride as the Product of a Catalytic Helium-Hydrogen Plasma Reaction," Int. J. Hydrogen Energy, Vol. 28, No. 12, (2003), pp. 1401-1424.
 19. R. L. Mills, P. Ray, "A Comprehensive Study of Spectra of the Bound-Free Hyperfine Levels of Novel Hydride Ion $H^-(1/2)$, Hydrogen, Nitrogen, and Air," Int. J. Hydrogen Energy, Vol. 28, No. 8, (2003), pp. 825-871.
 20. R. Mills, M. Nansteel, and P. Ray, "Excessively Bright Hydrogen-Strontium Plasma Light Source Due to Energy Resonance of Strontium with Hydrogen," J. of Plasma Physics, Vol. 69, (2003), pp. 131-158.
 21. R. Mills, "Highly Stable Novel Inorganic Hydrides," Journal of New Materials for Electrochemical Systems, Vol. 6, (2003), pp. 45-54.
 22. R. L. Mills, E. Dayalan, "Novel Alkali and Alkaline Earth Hydrides for High Voltage and High Energy Density Batteries," Proceedings of the 17th Annual Battery Conference on Applications and Advances, California State University, Long Beach, CA, (January 15-18, 2002), pp. 1-6.

23. R. M. Mayo, R. Mills, "Direct Plasmadynamic Conversion of Plasma Thermal Power to Electricity for Microdistributed Power Applications," 40th Annual Power Sources Conference Proceedings, Cherry Hill, NJ, June 10-13, (2002), pp. 1-4.
24. R. Mills and M. Nansteel, P. Ray, "Bright Hydrogen-Light Source due to a Resonant Energy Transfer with Strontium and Argon Ions," New Journal of Physics, Vol. 4, (2002), pp. 70.1-70.28.
25. R. M. Mayo, R. Mills, M. Nansteel, "Direct Plasmadynamic Conversion of Plasma Thermal Power to Electricity," IEEE Transactions on Plasma Science, Vol. 30, No. 5, (2002), pp. 2066-2073.
26. R. L. Mills, P. Ray, "Substantial Changes in the Characteristics of a Microwave Plasma Due to Combining Argon and Hydrogen," New Journal of Physics, www.njp.org, Vol. 4, (2002), pp. 22.1-22.17.
27. R. M. Mayo, R. Mills, M. Nansteel, "On the Potential of Direct and MHD Conversion of Power from a Novel Plasma Source to Electricity for Microdistributed Power Applications," IEEE Transactions on Plasma Science, Vol. 30, No. 4, (2002), pp. 1568-1578.
28. R. Mills, E. Dayalan, P. Ray, B. Dhandapani, J. He, "Highly Stable Novel Inorganic Hydrides from Aqueous Electrolysis and Plasma Electrolysis," Electrochimica Acta, Vol. 47, No. 24, (2002), pp. 3909-3926.
29. R. L. Mills, P. Ray, B. Dhandapani, R. M. Mayo, J. He, "Comparison of Excessive Balmer α Line Broadening of Glow Discharge and Microwave Hydrogen Plasmas with Certain Catalysts," J. of Applied Physics, Vol. 92, No. 12, (2002), pp. 7008-7022.
30. R. L. Mills, P. Ray, B. Dhandapani, M. Nansteel, X. Chen, J. He, "New Power Source from Fractional Quantum Energy Levels of Atomic Hydrogen that Surpasses Internal Combustion," J. Mol. Struct., Vol. 643, No. 1-3, (2002), pp. 43-54.
31. R. L. Mills, P. Ray, "Spectroscopic Identification of a Novel Catalytic Reaction of Rubidium Ion with Atomic Hydrogen and the Hydride Ion Product," Int. J. Hydrogen Energy, Vol. 27, No. 9, (2002), pp. 927-935.
32. R. Mills, J. Dong, W. Good, P. Ray, J. He, B. Dhandapani, "Measurement of Energy Balances of Noble Gas-Hydrogen Discharge Plasmas Using Calvet Calorimetry," Int. J. Hydrogen Energy, Vol. 27, No. 9, (2002), pp. 967-978.
33. R. L. Mills, A. Voigt, P. Ray, M. Nansteel, B. Dhandapani, "Measurement of Hydrogen Balmer Line Broadening and Thermal Power Balances of Noble Gas-Hydrogen Discharge Plasmas," Int. J. Hydrogen Energy, Vol. 27, No. 6, (2002), pp. 671-685.

34. R. Mills, P. Ray, "Vibrational Spectral Emission of Fractional-Principal-Quantum-Energy-Level Hydrogen Molecular Ion," Int. J. Hydrogen Energy, Vol. 27, No. 5, (2002), pp. 533-564.
35. R. Mills, P. Ray, "Spectral Emission of Fractional Quantum Energy Levels of Atomic Hydrogen from a Helium-Hydrogen Plasma and the Implications for Dark Matter," Int. J. Hydrogen Energy, Vol. 27, No. 3, (2002), pp. 301-322.
36. R. Mills, P. Ray, "Spectroscopic Identification of a Novel Catalytic Reaction of Potassium and Atomic Hydrogen and the Hydride Ion Product," Int. J. Hydrogen Energy, Vol. 27, No. 2, (2002), pp. 183-192.
37. R. Mills, "The Grand Unified Theory of Classical Quantum Mechanics," Int. J. Hydrogen Energy, Vol. 27, No. 5, (2002), pp. 565-590.
38. R. Mills and M. Nansteel, P. Ray, "Argon-Hydrogen-Strontium Discharge Light Source," IEEE Transactions on Plasma Science, Vol. 30, No. 2, (2002), pp. 639-653.
39. R. Mills, N. Greenig, S. Hicks, "Optically Measured Power Balances of Glow Discharges of Mixtures of Argon, Hydrogen, and Potassium, Rubidium, Cesium, or Strontium Vapor," Int. J. Hydrogen Energy, Vol. 27, No. 6, (2002), pp. 651-670.
40. R. Mills, "BlackLight Power Technology-A New Clean Hydrogen Energy Source with the Potential for Direct Conversion to Electricity," Proceedings of the National Hydrogen Association, 12th Annual U.S. Hydrogen Meeting and Exposition, *Hydrogen: The Common Thread*, The Washington Hilton and Towers, Washington DC, (March 6-8, 2001), pp. 671-697.
41. R. Mills, W. Good, A. Voigt, Jinqun Dong, "Minimum Heat of Formation of Potassium Iodo Hydride," Int. J. Hydrogen Energy, Vol. 26, No. 11, (2001), pp. 1199-1208.
42. R. Mills, "Spectroscopic Identification of a Novel Catalytic Reaction of Atomic Hydrogen and the Hydride Ion Product," Int. J. Hydrogen Energy, Vol. 26, No. 10, (2001), pp. 1041-1058.
43. R. Mills, B. Dhandapani, M. Nansteel, J. He, A. Voigt, "Identification of Compounds Containing Novel Hydride Ions by Nuclear Magnetic Resonance Spectroscopy," Int. J. Hydrogen Energy, Vol. 26, No. 9, (2001), pp. 965-979.
44. R. Mills, "The Nature of Free Electrons in Superfluid Helium--a Test of Quantum Mechanics and a Basis to Review its Foundations and Make a Comparison to Classical Theory," Int. J. Hydrogen Energy, Vol. 26, No. 10, (2001), pp. 1059-1096.
45. R. Mills, "Observation of Extreme Ultraviolet Emission from Hydrogen-KI Plasmas Produced by a Hollow Cathode Discharge," Int. J. Hydrogen Energy, Vol. 26, No. 6, (2001), pp. 579-592.

46. R. Mills, "Temporal Behavior of Light-Emission in the Visible Spectral Range from a Ti-K₂CO₃-H-Cell," Int. J. Hydrogen Energy, Vol. 26, No. 4, (2001), pp. 327-332.
47. R. Mills, T. Onuma, and Y. Lu, "Formation of a Hydrogen Plasma from an Incandescently Heated Hydrogen-Catalyst Gas Mixture with an Anomalous Afterglow Duration," Int. J. Hydrogen Energy, Vol. 26, No. 7, (2001), pp. 749-762.
48. R. Mills, M. Nansteel, and Y. Lu, "Observation of Extreme Ultraviolet Hydrogen Emission from Incandescently Heated Hydrogen Gas with Strontium that Produced an Anomalous Optically Measured Power Balance," Int. J. Hydrogen Energy, Vol. 26, No. 4, (2001), pp. 309-326.
49. R. Mills, B. Dhandapani, M. Nansteel, J. He, T. Shannon, A. Echezuria, "Synthesis and Characterization of Novel Hydride Compounds," Int. J. of Hydrogen Energy, Vol. 26, No. 4, (2001), pp. 339-367.
50. R. Mills, J. Dong, Y. Lu, "Observation of Extreme Ultraviolet Hydrogen Emission from Incandescently Heated Hydrogen Gas with Certain Catalysts," Int. J. Hydrogen Energy, Vol. 25, (2000), pp. 919-943.
51. R. Mills, B. Dhandapani, N. Greenig, J. He, "Synthesis and Characterization of Potassium Iodo Hydride," Int. J. of Hydrogen Energy, Vol. 25, No. 12, (2000), pp. 1185-1203.
52. R. Mills, "Novel Inorganic Hydride," Int. J. of Hydrogen Energy, Vol. 25, (2000), pp. 669-683.
53. R. Mills, "Novel Hydrogen Compounds from a Potassium Carbonate Electrolytic Cell," Fusion Technology, Vol. 37, No. 2, (2000), pp. 157-182.
54. R. Mills, "The Hydrogen Atom Revisited," Int. J. of Hydrogen Energy, Vol. 25, No. 12, December, (2000), pp. 1171-1183.
55. R. Mills, "The Grand Unified Theory of Classical Quantum Mechanics," Global Foundation, Inc. Orbis Scientiae entitled *The Role of Attractive and Repulsive Gravitational Forces in Cosmic Acceleration of Particles The Origin of the Cosmic Gamma Ray Bursts*, (Proceedings of the 29th Conference on High Energy Physics and Cosmology Since 1964) Dr. Behram N. Kursunoglu, Chairman, December 14-17, 2000, Lago Mar Resort, Fort Lauderdale, FL, Kluwer Academic/Plenum Publishers, New York, pp. 243-258.
56. R. Mills, "BlackLight Power Technology-A New Clean Energy Source with the Potential for Direct Conversion to Electricity," Proceedings of the Global Foundation International Conference on "Global Warming and Energy Policy," Dr. Behram N. Kursunoglu, Chairman, Fort Lauderdale, FL, November 26-28, 2000, Kluwer Academic/Plenum Publishers, New York, pp. 187-202.

57. Mills, R., Good, W., "Fractional Quantum Energy Levels of Hydrogen," Fusion Technology, Vol. 28, No. 4, (1995), pp. 1697-1719.
58. Mills, R., Good, W., Shaubach, R., "Dihydrino Molecule Identification," Fusion Technology, Vol. 25, (1994), pp. 103-119.
59. R. Mills and S. Kneizys, Fusion Technology, Vol. 20, (1991), pp. 65-81.
60. R. Mills, *The Grand Unified Theory of Classical Quantum Mechanics*, September 2001 Edition, BlackLight Power, Inc., Cranbury, New Jersey, Distributed by Amazon.com; July 2003 Edition posted at www.blacklightpower.com.