

PATENT LISTING

PATENT #	TITLE
1 8,698,413	RF induction lamp with reduced electromagnetic interference
2 7,795,814	Interconnection feedthroughs for ceramic metal halide lamps
3 7,714,512	High red color rendition metal halide lamp
4 7,652,429	Electrodes with cermets for ceramic metal halide lamps
5 7,339,330	Methods and circuits for instant hot restart of high intensity discharge lamps
6 7,323,824	Methods and apparatus for operating very high pressure short arc discharge lamps
7 7,279,840	Electrodeless fluorescent lamp with controlled cold spot temperature
8 7,262,553	High efficacy metal halide lamp with configured discharge chamber
9 7,164,232	Seal for ceramic discharge lamp arc tube
10 7,138,765	High efficacy lamp in a configured chamber
11 7,088,033	Electrodeless fluorescent lamp with stabilized operation at high and low ambient temperatures
12 7,057,350	Metal halide lamp with improved lumen value maintenance
13 7,049,768	High intensity discharge lamps with electronic control of dimming
14 6,979,958	High efficacy metal halide lamp with praseodymium and sodium halides in a configured chamber
15 6,819,050	Metal halide lamp with trace T1I filling for improved dimming properties
16 6,768,248	Electrodeless lamp
17 6,717,364	Thallium free--metal halide lamp with magnesium halide filling for improved dimming properties
18 6,605,888	Metal halide lamp with enhanced red emission, in excess of a blackbody
19 6,555,954	Compact electrodeless fluorescent lamp with improved cooling
20 6,548,965	Electrodeless fluorescent lamp with low wall loading
21 6,501,220	Thallium free--metal halide lamp with magnesium and cerium halide filling for improved dimming properties
22 6,441,564	High efficacy pulsed, dimmable high pressure cesium lamp
23 6,433,478	High frequency electrodeless compact fluorescent lamp
24 6,404,141	Electrodeless discharge lamp
25 6,369,518	Lamps with electronic control of color temperature and color rendering index
26 6,366,020	Universal operating DC ceramic metal halide lamp
27 6,249,090	Electrodeless fluorescent lamp with spread induction coil
28 6,242,851	Dimmable metal halide lamp without color temperature change
29 6,081,070	High-frequency electrodeless fluorescent lamp
30 6,064,155	Compact fluorescent lamp as a retrofit for an incandescent lamp
31 5,990,624	Color sulfur lamp including means for intercepting and re-mitting light of a desired spectral distribution
32 5,811,925	Integrally molded flat compact fluorescent lamp
33 5,777,431	Substantially flat compact fluorescent lamp

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PATENT #	TITLE
34 5,773,926	Electrodeless fluorescent lamp with cold spot control
35 5,767,618	Flat compact fluorescent lamp with inter-channel discharge suppression
36 5,726,523	Electrodeless fluorescent lamp with bifilar coil and faraday shield
37 5,723,947	Electrodeless inductively-coupled fluorescent lamp with improved cavity and tubulation
38 5,717,284	Method of manufacturing substantially flat compact fluorescent lamp
39 5,708,324	Fluorescent lamp with different density phosphor coatings on the front panel and internal channels
40 5,698,951	Electrodeless discharge lamp and device for increasing the lamp's luminous development
41 5,690,421	Display lighting with matched narrow band filter and light source
42 5,637,965	Low pressure sodium-mercury lamp yielding substantially white light
43 5,621,266	Electrodeless fluorescent lamp
44 5,592,052	Variable color temperature fluorescent lamp
45 5,552,666	Compact fluorescent lamp
46 5,541,477	Self ballasted compact fluorescent lamp
47 5,500,574	Inductively coupled substantially flat fluorescent light source
48 5,455,484	Adapter for simultaneously powering multiple compact fluorescent lamps utilizing an electronic ballast circuit
49 5,266,864	Negative glow discharge lamp with fill containing cesium or sodium
50 5,186,668	Negative glow discharge lamp
51 5,120,251	Negative glow discharge lamp
52 5,066,892	Glow discharge lamp with incandescent filament
53 5,027,030	Glow discharge lamp having zero anode voltage drop
54 5,025,190	Glow discharge lamp
55 5,024,741	Hybrid isotope separation scheme
56 5,024,739	Novel hybrid isotope separation scheme and apparatus
57 5,021,718	Negative glow discharge lamp
58 4,935,664	Diffuse discharge lamp
59 4,884,007	Low pressure arc discharge tube having increased voltage
60 4,825,125	Discharge lamp having multiple constrictions
61 4,816,719	Low pressure arc discharge tube with reduced ballasting requirement
62 4,736,134	Discharge lamp having multiple constrictions
63 4,698,547	Low pressure arc discharge lamp apparatus with magnetic field generating means
64 4,692,661	Fluorescent lamp with static magnetic field generating means
65 4,672,267	High intensity discharge device containing oxytrihalides
66 4,648,951	Photoionization technique to enrich mercury isotopes and apparatus therefor

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PATENT #	TITLE
67 4,596,681	Method of forming capsules containing a precise amount of material
68 4,575,344	Metal arc director for compact fluorescent lamp
69 4,536,678	Glass coated metal arc director for compact fluorescent lamp
70 4,527,089	Compact fluorescent lamp
71 4,527,088	Metal arc director for compact fluorescent lamp
72 4,527,086	Arc discharge device with improved isotopic mixture of mercury
73 4,296,350	Gaseous fluorescent discharge lamp

PUBLICATION LISTING

- 1 "Cross Sections for the Alkali Atom – Br₂ Reactions". J Chem. Phys., vol. 59, p. 3143 (1973) (with P. Davidovits)
- 2 Presentation at VIIIth ICPEAC Meeting in Belgrad, Yugoslavia, July 15-20, 1973. Proceedings of the VIIIth International Conference on Electronic and Atomic Collisions. Vol. 1, p. 95 (1973)
- 3 "Thermal Diffusion of Br₂ and Cl₂ in the Noble Gases". J. Chem. Phys., vol. 60, p. 1624 (1974) (with P. Davidovits)
- 4 Presentation at APS Meeting in Washington D.C., April 23-26, 1973. Bull. Of Am. Phys. Soc., vol. 18, p. 671 (1973). (publication missing)
- 5 "Cross Sections for Alkali Atom – Cl₂ Reactions". J. Chem. Phys., vol. 61, p. 1082 (1974) (with P. Davidovits)
- 6 "Reactions of Metal Dimers (M₂) with Halogen Atoms (X)". Bull. Of Am. Phys. Soc., vol. 19, p. 26 (1974)
- 7 "Cross Section for the Reaction of Thallium Atoms with Br₂". J. Chem. Phys., vol. 62, p. 1995 (1975) (with P. Davidovits)
- 8 "Chemiluminescence from Thallium-Fluorine Reactions". J. Chem. Phys., vo. 64, p. 84 (1976) (with P.C. Nordine)
- 9 "A Study of Activated Wood Char". Report submitted to Environment Incorporated. (April 1977) (with G.L. Haller)
- 10 "Sodium Dimer Emission Observed in Arc Discharge Afterglow". Bull. Of Am. Phys. Soc., vol. 22, p. 198 (1977) (with E.F. Wyner)
- 11 "Ultraviolet Absorption Cross Sections of HgI₂, HgBr₂, and Tin (II) Halide Vapors". J. Chem. Phys., vol. 67, p. 4976 (1977)
- 12 Presentation at the 152nd Meeting of the Electrochemical Society, Atlanta, GA, 1977. Proceedings vol. 78-1, p. 106 (1978)
- 13 "Fluorescence Yields of Metal Halide Vapors Excited by Photodissociation). App. Phys. Letter, vol. 32, p. 484 (1978)
- 14 Presentation at the 30th Gaseous Electronics Conference, Palo Alto, CA, Bull. Of Am. Phys. Soc., 23, 142 (1977) (publication missing)
- 15 "Efficient Thallium Photodissociation Lasers). App. Phys. Letter, vol. 33, p. 931 (1978) with D.J. Erlich and R.M. Osgood, Jr.)
- 16 "Quantum Efficiency of Fluorescence Excited by Photodissociation in Metal Halide Vapors and Applications". (Invited Paper) IEEE J. of Quant. Electr., vol. QE-15, p. 579 (1979)
- 17 "Recherche Sur Une Source de Faible Puissance aux Halogenures Metalliques". Lux la Revue de L'eclairage 115, 39 (1981) (with W.M. Keefe, H.L. Rothwell Jr., W.C. Gungle, and J.A. Scholz)
- 18 "Quantum Efficiency of Fluorescence from the Na-Hg Vapor Excited by 253.7-nm Radiation". App. Phys. Letter (40(11), p. 933 (1982)

- 19 "Alternating Current Cathode Fall Characteristics for Rare Gases in Cold Cathode Discharges". Bull. Of Am. Phys. Soc. 27, 107 (1982)(with R. Lagushenko)
- 20 "Current Density for Cold Cathode Discharge Gap in Rare Gases". J. App. Phys. 54, 2255 (1983)(with R. Lagushenko)
- 21 "Electron Swarm Parameters in Rare Gases and Mixtures". J. App. Phys. 55, 3293 (1984)(with R. Lagushenko)
- 22 "Improved Efficiencies for Fluorescent Lamps by Altering the Mercury Isotopic Composition". Third International Symposium on the Sci. and Techn. Of Light Sources, Toulouse, France, April 1983 (with S.G. Johnson, D. Work, and J.F. Waymouth)
- 23 "Investigation of Fluorescent Lamps with Altered Mercury Isotopic Distributions", 1983 IES National Technical Conference, Los Angeles, CA, August 1983 (with M. Grossman and S.G. Johnson)
- 24 "Ionization Coefficiency and Total Excitation Cross Sections for Rare Gases". Presented at XVI International Conference on Phenomena in Ionized Gases, August 29, 1983, Dusseldorf, W. Germany (with R. Lagushenko). (publication missing)
- 25 "Novel Higher Efficiency Fluorescent Lamps". GTE Technical Newsletter 5, 4 (1983) (publication missing)
- 26 "Test Evaluation and Report on Mercury Enrichment for Fluorescent Lamps". Annual Report, Lawrence Berkeley Laboratory (1983) (publication missing)
- 27 "Photochemical Enrichment of ^{196}Hg ". International Quantum electronics conference, paper Th114 (IQEC'84), June 1984, Anaheim, CA (with M. Grossman)
- 28 "Positive Column Hg – Rare Gas Discharge Model Applicable to Compact Fluorescent Lamps". Journal of IES, p. 306-314, Oct. 1984
- 29 "Energy Conservation Through More Efficient Lighting". Science 226, p. 435 (1984) (with M.W. Grossman, R. Lagushenko, and J.F. Waymouth)
- 30 "An Improved Model of the Low Pressure Hg – Rare Gas Positive Column Discharge". J. of Appl. Phys. 55, 3293 (1984) (with R. Lagushenko)
- 31 "Isotope Effects in Atomic Resonance Radiation Transport". Bull. Of Am. Phys. Soc. 30, 144 (1985)
- 32 "Monte Carlo Treatment of Resonance-Radiation Imprisonment in Fluorescent Lamps". Phys. Rev. A, vol. 31, p. 2968-2975 (May 1985) (with J.B. Anderson, M.W. Grossman, R. Lagushenko, and J.F. Waymouth)
- 33 "Cross Section for Electronic Energy Transfer Between Hg Isotopes". Chemical Physics Letters, vol. 120, Number 1 (Sept. 17, 1985)
- 34 "Radial Distribution of Mercury Isotopes in a Low Pressure Hg-Ar Discharge". Bull of Am. Phys. Soc. 31, 152 (1986) (with M.W. Grossman and R. Lagushenko)
- 35 "Metal Oxide Containing High Intensity Discharge Lamp". 4th International Symposium on the Science and Technology of Light Sources, Karlsruhe, W.Germany, April 1986 (with W.P. Lapovich, W.M. Keeffe, N. Brates, and R.W. Liebermann) (consists of two papers)

- 36 "Recent Progress in Low Pressure Hg-Rare Gas Discharge Research". Invited paper, 4th International Symposium on the Science and Technology of Light Sources, Karlsruhe, W.Germany, April 1986
- 37 "Efficacy Increases in Fluorescent Lamps Under Axial and Transverse Magnetic Fields". Journal of IES, Winter 1987, p. 105-116 (with P. Moskowitz and F. Whitney)
- 38 "Pulsed Laser Diagnostics for HID Lamps". 1986 IES National Technical Conference, Boston, MA, August 1986 (with G. Allen, R. Lagushenko and W. Keeffe) (publication missing)
- 39 "Measurement of Sodium Groundstate Density Profile in a Metal-Halide Lamp Using Laser Absorption Spectroscopy". Journal of IES, Summer 1987, p. 13-20
- 40 "Physical Diagnostics for Low and High Pressure Discharge Lamps, Annual Report DOE No. DE-AC03-84SF12235, (1986) (with G. Allen, N. Brates, W. Keeffe, W. Lapatovich, R. Lieberman, and P. Moskowitz) (publication missing)
- 41 "Isotope Effects in Low Pressure Hg-Rare Gas Discharges". Phys. Rev. A, 38, 2044 (1988) (with M.W. Grossman and R. Lagushenko)
- 42 "Electron Energy Distribution Near An Orifice in Hg-Me Low Pressure Discharge". Bull. Of Am. Phys. Soc. 32, 1146 (1987) (with R. Lagushenko and V. Godyak)
- 43 "Spatial Evolution of the Electron-Energy Distribution in the Vicinity of a Discharge Tube Constriction". Phys. Rev. A, 38, 2044 (1988)
- 44 "Progress in Low Pressure Mercury-Rare Gas Discharge Research". Invited Article. Advances in Atomic, Molecular and Optical Physics (ed. by D. Bates and B. Bederson), Vol. 26, 321 (1989) Academic Press, CA (with R. Lagushenko)
- 45 "Mercury-Free HPS Lamp with High CRI Operated with Choke Type Ballast" Illum. Engineering Soc. Of Japan Annual Meeting, Fall 1996 (with N. Saito, T. Sumitomo, K. Nishioka, A. Okada, M. Toho, and J. Ravi)
- 46 "Feasibility Study of Electrodeless Fluorescent Lamps for Outdoor Signal Applications". J. of Illuminating Engineering Soc., Summer 1998, p. 35 (with M. Shea)
- 47 "Pulse Modulated High Pressure Caesium Discharge Lamp". Plasma Sources Science and Techn. 10, (2001), 1-9 (with H. Gu, M.E. Muzeroll, J.C. Chamberlain)
- 48 "Characteristics of Electrodeless Ferrite-Free Fluorescent Lamp Operated at Frequencies of 1-15 MHz. Plasma Sources Science and Techn. 9, (2000) 227 (with O. Popov)
- 49 "Variable Color Temperature Fluorescent Lamp". J. App. Phys. 87, 4107 (2000) (with J. Ravi)
- 50 "Duty Cycle Color Control of Metal Halide Lamps". Proc. Of Int'l. Symp. On Light Source Sci. and Techn. LS-9, p. 21, Cornell Univ. August 2001 (with T. Kelly and H. Zhu)
- 51 "Systems View of Novel Light Source R&D". Invited keynote presentation Proc. Of Int'l. Symp. On Light Source Sci. and Techn. LS-9, I-001, Cornell Univ., August 2001
- 52 "Discharge Properties of the Low Frequency Driven Electrodeless Fluorescent Lamp". Illum. Engineering Soc. Of Japan, August 2003 (with T. Arakawa, K. Hashimotodani, A. Hoshi, R. Chandler, and O. Popov)

- 53 "Salt-Frit Reactions in Ceramic Metal Halide Lamps". Proc. Of Int'l Symp. On Light Source Sci. and Techn. LS-10, Toulouse France, P-158 (with N. Brates, D. Goodman, Y. Nishiura, N. Takeuchi) 2004
- 54 "Low Frequency Electrodeless Compact Fluorescent Lamp". Proc. Of Int'l Symp. On Light Source Sci. and Techn. LS-10, Toulouse France, p-116, Toulouse France, 2004 (with O. Popov and R. Chandler)
- 55 "Dimming of Ceramic Metal Halide Lamps". Proc. Of Int'l Symp. On Light Source Sci. and Techn. LS-10, Toulouse France, p. 96, 2004 (with H. Zhu and S. Lambrechts)
- 56 "High Power (100-200W) Ferrite-Free Electrodeless Fluorescent Lamp". Proc. Of Int'l Symp. On Light Source Sci. and Techn. LS-10, Toulouse France, L-15, 2004 (with O. Popov and R. Chandler)
- 57 "Effects of Induction Coil Factor on Efficacy of ~100 KHz Electrodeless Fluorescent Lamps". Proc. Of Int'l Symp. On Light Source Sci. and Techn. LS-10, Toulouse France, P-128, 2004 (with H. Kakehashi, K. Kiramatsu, S. Hizuma, O. Popov, and R. Chandler)