Michael A Lieberman

List of Publications by Year
in descending order

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87 papers	8,129 citations	109264 35 h-index	98753 67 g-index
88 all docs	88 docs citations	88 times ranked	3663 citing authors

#	Article	IF	Citations
1	Nonlinear transmission line (NTL) model study of electromagnetic effects in high-frequency asymmetrically driven capacitive discharges. Physics of Plasmas, 2022, 29, 013508.	0.7	3
2	Particle-in-cell simulations of the alpha and gamma modes in collisional nitrogen capacitive discharges. Plasma Sources Science and Technology, 2021, 30, 035001.	1.3	9
3	Nonlinear harmonic excitations in collisional, asymmetrically-driven capacitive discharges. Plasma Sources Science and Technology, 2021, 30, 045017.	1.3	8
4	Benchmarked and upgraded particle-in-cell simulations of a capacitive argon discharge at intermediate pressure: the role of metastable atoms. Plasma Sources Science and Technology, 2021, 30, 105009.	1.3	24
5	Surface effects in a capacitive argon discharge in the intermediate pressure regime. Plasma Sources Science and Technology, 2021, 30, 125011.	1.3	9
6	Particle-in-cell simulations and passive bulk model of collisional capacitive discharge. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	11
7	Instability-enhanced transport in low temperature magnetized plasma. Physics of Plasmas, 2019, 26, .	0.7	12
8	Multi-mode ionization instability induced striations in RF driven He/H2O atmospheric pressure plasma (APP) discharges. Physics of Plasmas, 2019, 26, 093506.	0.7	2
9	Observation of Nonlinear Standing Waves Excited by Plasma-Series-Resonance-Enhanced Harmonics in Capacitive Discharges. Physical Review Letters, 2019, 122, 185002.	2.9	38
10	Ionization instability induced striations in low frequency and pulsed He/H2O atmospheric pressure plasmas. Physics of Plasmas, 2018, 25, .	0.7	7
11	Symmetry breaking in high frequency, symmetric capacitively coupled plasmas. Physics of Plasmas, 2018, 25, 093517.	0.7	14
12	Experimental investigation of standing wave effect in dual-frequency capacitively coupled argon discharges: role of a low-frequency source. Plasma Sources Science and Technology, 2018, 27, 055017.	1.3	20
13	Ion Energy and Angular Distribution in Biased Inductively Coupled Ar/O₂ Discharges by Using a Hybrid Model. Plasma Processes and Polymers, 2017, 14, 1600100.	1.6	14
14	Ionization instability induced striations in atmospheric pressure He/H₂O RF and DC discharges. Journal Physics D: Applied Physics, 2017, 50, 145204.	1.3	5
15	A nonlinear electromagnetics model of an asymmetrically-driven, low pressure capacitive discharge. Physics of Plasmas, 2017, 24, .	0.7	21
16	Effect of a dielectric layer on plasma uniformity in high frequency electronegative capacitive discharges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	14
17	Nonlinear series resonance and standing waves in dual-frequency capacitive discharges. Plasma Sources Science and Technology, 2017, 26, 015007.	1.3	28
18	Linear electromagnetic excitation of an asymmetric low pressure capacitive discharge with unequal sheath widths. Physics of Plasmas, 2016, 23, .	0.7	22

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19	2D fluid-analytical simulation of electromagnetic effects in low pressure, high frequency electronegative capacitive discharges. Plasma Sources Science and Technology, 2016, 25, 035007.	1.3	14
20	Standing striations due to ionization instability in atmospheric pressure He/H₂O radio frequency capacitive discharges. Plasma Sources Science and Technology, 2016, 25, 054009.	1.3	10
21	Analytical model of atmospheric pressure, helium/trace gas radio-frequency capacitive Penning discharges. Plasma Sources Science and Technology, 2015, 24, 025009.	1.3	16
22	Nonlinear standing wave excitation by series resonance-enhanced harmonics in low pressure capacitive discharges. Plasma Sources Science and Technology, 2015, 24, 055011.	1.3	34
23	Fast 2D fluid-analytical simulation of ion energy distributions and electromagnetic effects in multi-frequency capacitive discharges. Plasma Sources Science and Technology, 2014, 23, 064003.	1.3	29
24	Electron heating in low pressure capacitive discharges revisited. Physics of Plasmas, 2014, 21, 123505.	0.7	24
25	Hybrid model of atmospheric pressure Ar/O2/TiCl4 radio-frequency capacitive discharge for TiO2 deposition. Journal of Applied Physics, 2014, 115, .	1.1	4
26	Particle-in-cell and global simulations ofÎ±toÎ³transition in atmospheric pressure Penning-dominated capacitive discharges. Plasma Sources Science and Technology, 2014, 23, 035014.	1.3	26
27	Comparison of a hybrid model with experiments in atmospheric pressure helium and argon capacitive rf discharges. Plasma Sources Science and Technology, 2014, 23, 065048.	1.3	13
28	Hybrid model of neutral diffusion, sheaths, and theÎ±toÎ³transition in an atmospheric pressure He/H₂O bounded rf discharge. Journal Physics D: Applied Physics, 2014, 47, 305203.	1.3	15
29	A benchmark study of a capacitively coupled oxygen discharge of the oopd1 particle-in-cell Monte Carlo code. Plasma Sources Science and Technology, 2013, 22, 035011.	1.3	77
30	Narrow gap electronegative capacitive discharges. Physics of Plasmas, 2013, 20, 101603.	0.7	2
31	Analyticalâ€“numerical global model of atmospheric-pressure radio-frequency capacitive discharges. Plasma Sources Science and Technology, 2012, 21, 035013.	1.3	51
32	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Ar</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Xe</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math>Velocities near the Presheath-Sheath Boundary in an<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ar</mml:mi><mml:mo>/<	2.9	30
33	Fast 2D hybrid fluid-analytical simulation of inductive/capacitive discharges. Plasma Sources Science and Technology, 2011, 20, 035009.	1.3	47
34	Two-dimensional particle-in-cell simulations of transport in a magnetized electronegative plasma. Journal of Applied Physics, 2010, 108, 103305.	1.1	9
35	Waves in expanding electronegative plasmas containing double layers. Journal of Applied Physics, 2010, 107, 123301.	1.1	3
36	Double layer formation in a two-region electronegative plasma. Physics of Plasmas, 2009, 16, 122114.	0.7	7

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37	Enhancement of Ohmic and Stochastic Heating by Resonance Effects in Capacitive Radio Frequency Discharges: A Theoretical Approach. Physical Review Letters, 2008, 101, 085004.	2.9	160
38	Modeling electromagnetic effects in capacitive discharges. Plasma Sources Science and Technology, 2008, 17, 015018.	1.3	82
39	The effects of nonlinear series resonance on Ohmic and stochastic heating in capacitive discharges. Physics of Plasmas, 2008, 15, .	0.7	87
40	Theory of a double-layer in an expanding electronegative plasma. Physics of Plasmas, 2007, 14, .	0.7	37
41	Stochastic heating in single and dual frequency capacitive discharges. Physics of Plasmas, 2006, 13, 053506.	0.7	150
42	Inductive heating and E to H transitions in high frequency capacitive discharges. Plasma Sources Science and Technology, 2006, 15, S130-S136.	1.3	55
43	Inductive Heating andEtoHTransitions in Capacitive Discharges. Physical Review Letters, 2005, 95, 205001.	2.9	58
44	Grounded radio-frequency electrodes in contact with high density plasmas. Physics of Plasmas, 2005, 12, 103505.	0.7	15
45	Self-consistent nonlinear transmission line model of standing wave effects in a capacitive discharge. Physics of Plasmas, 2004, 11, 1775-1785.	0.7	99
46	Dynamics of steady and unsteady operation of inductive discharges with attaching gases. Journal of Applied Physics, 2003, 94, 831-843.	1.1	31
47	Self-consistent discharge characteristics of collisional helicon plasmas. Physics of Plasmas, 2003, 10, 882-890.	0.7	34
48	Radical dynamics in unstable CF4 inductive discharges. Journal of Applied Physics, 2003, 94, 76-84.	1.1	31
49	Standing wave and skin effects in large-area, high-frequency capacitive discharges. Plasma Sources Science and Technology, 2002, 11, 283-293.	1.3	324
50	Photoresist etching in an inductively coupled, traveling wave driven, large area plasma source. Journal of Applied Physics, 2001, 89, 869-877.	1.1	8
51	Effect of ion energy on photoresist etching in an inductively coupled, traveling wave driven, large area plasma source. Journal of Applied Physics, 2001, 89, 5318-5321.	1.1	6
52	Effect of Ar addition to an O2 plasma in an inductively coupled, traveling wave driven, large area plasma source: O2/Ar mixture plasma modeling and photoresist etching. Journal of Applied Physics, 2001, 90, 3205-3211.	1.1	73
53	Modeling a metalâ€"vapor buffer-gas hollow cathode discharge. Journal of Applied Physics, 2000, 87, 7191-7197.	1.1	12
54	Instabilities in low-pressure inductive discharges with attaching gases. Applied Physics Letters, 1999, 75, 3617-3619.	1.5	63

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55	Internal sheaths in electronegative discharges. Journal of Applied Physics, 1999, 86, 4142-4153.	1.1	71
56	Magnetic induction and plasma impedance in a planar inductive discharge. Plasma Sources Science and Technology, 1998, 7, 83-95.	1.3	30
57	Measurements of pulsedâ€power modulated argon plasmas in an inductively coupled plasma source. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1996, 14, 391-397.	0.9	95
58	Role of etch products in polysilicon etching in a high-density chlorine discharge. Plasma Chemistry and Plasma Processing, 1996, 16, 99-120.	1.1	158
59	Global model of Ar, O2, Cl2, and Ar/O2 highâ€density plasma discharges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 368-380.	0.9	469
60	Spatially averaged (global) model of time modulated high density argon plasmas. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 2498-2507.	0.9	248
61	High frequency reactive ion etching of silylated photoresist. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1994, 12, 1351.	1.6	9
62	Global Model of Plasma Chemistry in a High Density Oxygen Discharge. Journal of the Electrochemical Society, 1994, 141, 1546-1555.	1.3	211
63	Capacitive RF discharges modelled by particle-in-cell Monte Carlo simulation. II. Comparisons with laboratory measurements of electron energy distribution functions. Plasma Sources Science and Technology, 1993, 2, 273-278.	1.3	101
64	Analytic model of the ion angular distribution in a collisional sheath. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1993, 11, 1275-1282.	0.9	26
65	Selfâ€consistent electron cyclotron resonance absorption in a plasma with varying parameters. Journal of Applied Physics, 1992, 72, 3924-3933.	1.1	31
66	Model of plasma immersion ion implantation for voltage pulses with finite rise and fall times. Journal of Applied Physics, 1991, 70, 3481-3487.	1.1	168
67	Sheath voltage ratio for asymmetric rf discharges. Journal of Applied Physics, 1991, 69, 3823-3829.	1.1	42
68	Structural and Interfacial Characteristics of thin (<10 nm) SiO2 Films Grown by Electron Cyclotron Resonance Plasma Oxidation on [100] Si Substrates. Materials Research Society Symposia Proceedings, 1991, 223, 75.	0.1	1
69	Selective Copper Plating in Silicon Dioxide Trenches with Metal Plasma Immersion Ion Implantation. Materials Research Society Symposia Proceedings, 1991, 223, 377.	0.1	7
70	Oxidation of silicon in an electron cyclotron resonance oxygen plasma: Kinetics, physicochemical, and electrical properties. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 2924-2930.	0.9	62
71	Electronâ€beam probe measurements of electric fields in rf discharges. Journal of Applied Physics, 1990, 68, 6117-6124.	1.1	54
72	Kinetics of photoresist etching in an electron cyclotron resonance plasma. Journal of Applied Physics, 1990, 68, 1859-1865.	1.1	38

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73	Spatial structure of a planar magnetron discharge. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 902-907.	0.9	57
74	Cavity perturbation measurement of plasma density in complex geometry rf discharges. Journal of Applied Physics, 1989, 66, 1618-1621.	1.1	4
75	Spherical shell model of an asymmetric rf discharge. Journal of Applied Physics, 1989, 65, 4186-4191.	1.1	90
76	Model of plasma immersion ion implantation. Journal of Applied Physics, 1989, 66, 2926-2929.	1.1	279
77	Macroscopic modeling of radioâ€frequency plasma discharges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1989, 7, 1007-1013.	0.9	85
78	Plasma Immersion Ion Implantation for Impurity Gettering in Silicon. Materials Research Society Symposia Proceedings, 1989, 147, 91.	0.1	9
79	Axial distribution of optical emission in a planar magnetron discharge. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 2960-2964.	0.9	66
80	Radial current distribution at a planar magnetron cathode. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 1827-1831.	0.9	97
81	Electron beam timeâ€ofâ€flight plasma potential diagnostic. Review of Scientific Instruments, 1988, 59, 128-131.	0.6	0
82	Selfâ€consistent stochastic electron heating in radio frequency discharges. Journal of Applied Physics, 1988, 64, 4375-4383.	1.1	78
83	Stochasticity and resonances in the two beam accelerator. AIP Conference Proceedings, 1987, , .	0.3	0
84	Many-dimensional Hamiltonian systems. , 1987, , .		0
85	Low impedance intense electron beam device. Review of Scientific Instruments, 1975, 46, 1399-1401.	0.6	1
86	Production of Alkali Plasmas by Photoionization. Review of Scientific Instruments, 1973, 44, 35-37.	0.6	3
87	Shielding of moving test particles in warm, isotropic plasma. Journal of Plasma Physics, 1973, 9, 311-324.	0.7	47