

Michael A Lieberman

List of Publications by Citations

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85
papers

7,074
citations

34
h-index

84
g-index

88
ext. papers

7,711
ext. citations

2.9
avg, IF

6.09
L-index

#	Paper	IF	Citations
85	2005,		3055
84	Global model of Ar, O ₂ , Cl ₂ , and Ar/O ₂ high-density plasma discharges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995 , 13, 368-380	2.9	420
83	Standing wave and skin effects in large-area, high-frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2002 , 11, 283-293	3.5	279
82	Model of plasma immersion ion implantation. <i>Journal of Applied Physics</i> , 1989 , 66, 2926-2929	2.5	249
81	Spatially averaged (global) model of time modulated high density argon plasmas. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995 , 13, 2498-2507	2.9	219
80	Global Model of Plasma Chemistry in a High Density Oxygen Discharge. <i>Journal of the Electrochemical Society</i> , 1994 , 141, 1546-1555	3.9	191
79	Model of plasma immersion ion implantation for voltage pulses with finite rise and fall times. <i>Journal of Applied Physics</i> , 1991 , 70, 3481-3487	2.5	148
78	Role of etch products in polysilicon etching in a high-density chlorine discharge. <i>Plasma Chemistry and Plasma Processing</i> , 1996 , 16, 99-120	3.6	144
77	Stochastic heating in single and dual frequency capacitive discharges. <i>Physics of Plasmas</i> , 2006 , 13, 053506	3.6	131
76	Enhancement of ohmic and stochastic heating by resonance effects in capacitive radio frequency discharges: a theoretical approach. <i>Physical Review Letters</i> , 2008 , 101, 085004	7.4	130
75	Self-consistent nonlinear transmission line model of standing wave effects in a capacitive discharge. <i>Physics of Plasmas</i> , 2004 , 11, 1775-1785	2.1	91
74	Capacitive RF discharges modelled by particle-in-cell Monte Carlo simulation. II. Comparisons with laboratory measurements of electron energy distribution functions. <i>Plasma Sources Science and Technology</i> , 1993 , 2, 273-278	3.5	91
73	Radial current distribution at a planar magnetron cathode. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1988 , 6, 1827-1831	2.9	88
72	Measurements of pulsed-power modulated argon plasmas in an inductively coupled plasma source. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996 , 14, 391-397	2.9	86
71	Spherical shell model of an asymmetric rf discharge. <i>Journal of Applied Physics</i> , 1989 , 65, 4186-4191	2.5	86
70	Macroscopic modeling of radio-frequency plasma discharges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1989 , 7, 1007-1013	2.9	80
69	The effects of nonlinear series resonance on Ohmic and stochastic heating in capacitive discharges. <i>Physics of Plasmas</i> , 2008 , 15, 063505	2.1	72

68	Self-consistent stochastic electron heating in radio frequency discharges. <i>Journal of Applied Physics</i> , 1988 , 64, 4375-4383	2.5	71
67	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. <i>Journal of Applied Physics</i> , 2001 , 90, 3205-3211	2.5	68
66	Internal sheaths in electronegative discharges. <i>Journal of Applied Physics</i> , 1999 , 86, 4142-4153	2.5	67
65	Modeling electromagnetic effects in capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2008 , 17, 015018	3.5	66
64	Axial distribution of optical emission in a planar magnetron discharge. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1988 , 6, 2960-2964	2.9	64
63	A benchmark study of a capacitively coupled oxygen discharge of the oopd1 particle-in-cell Monte Carlo code. <i>Plasma Sources Science and Technology</i> , 2013 , 22, 035011	3.5	61
62	Instabilities in low-pressure inductive discharges with attaching gases. <i>Applied Physics Letters</i> , 1999 , 75, 3617-3619	3.4	59
61	Oxidation of silicon in an electron cyclotron resonance oxygen plasma: Kinetics, physicochemical, and electrical properties. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990 , 8, 2924-2930	2.9	57
60	Spatial structure of a planar magnetron discharge. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990 , 8, 902-907	2.9	57
59	Inductive heating and E to H transitions in capacitive discharges. <i>Physical Review Letters</i> , 2005 , 95, 205001	4.4	53
58	Analytical-numerical global model of atmospheric-pressure radio-frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2012 , 21, 035013	3.5	47
57	Inductive heating and E to H transitions in high frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2006 , 15, S130-S136	3.5	46
56	Shielding of moving test particles in warm, isotropic plasma. <i>Journal of Plasma Physics</i> , 1973 , 9, 311-324	2.7	46
55	Electron-beam probe measurements of electric fields in rf discharges. <i>Journal of Applied Physics</i> , 1990 , 68, 6117-6124	2.5	45
54	Fast 2D hybrid fluid-analytical simulation of inductive/capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2011 , 20, 035009	3.5	40
53	Sheath voltage ratio for asymmetric rf discharges. <i>Journal of Applied Physics</i> , 1991 , 69, 3823-3829	2.5	39
52	Kinetics of photoresist etching in an electron cyclotron resonance plasma. <i>Journal of Applied Physics</i> , 1990 , 68, 1859-1865	2.5	34
51	Theory of a double-layer in an expanding electronegative plasma. <i>Physics of Plasmas</i> , 2007 , 14, 093502	2.1	31

50	Self-consistent discharge characteristics of collisional helicon plasmas. <i>Physics of Plasmas</i> , 2003 , 10, 882-890	3.0	30
49	Radical dynamics in unstable CF ₄ inductive discharges. <i>Journal of Applied Physics</i> , 2003 , 94, 76-84	2.5	30
48	Magnetic induction and plasma impedance in a planar inductive discharge. <i>Plasma Sources Science and Technology</i> , 1998 , 7, 83-95	3.5	29
47	Dynamics of steady and unsteady operation of inductive discharges with attaching gases. <i>Journal of Applied Physics</i> , 2003 , 94, 831-843	2.5	29
46	Self-consistent electron cyclotron resonance absorption in a plasma with varying parameters. <i>Journal of Applied Physics</i> , 1992 , 72, 3924-3933	2.5	27
45	Ar ⁺ and Xe ⁺ velocities near the presheath-sheath boundary in an Ar/Xe discharge. <i>Physical Review Letters</i> , 2011 , 107, 045002	7.4	26
44	Analytic model of the ion angular distribution in a collisional sheath. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1993 , 11, 1275-1282	2.9	25
43	Nonlinear standing wave excitation by series resonance-enhanced harmonics in low pressure capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2015 , 24, 055011	3.5	22
42	Observation of Nonlinear Standing Waves Excited by Plasma-Series-Resonance-Enhanced Harmonics in Capacitive Discharges. <i>Physical Review Letters</i> , 2019 , 122, 185002	7.4	20
41	Nonlinear series resonance and standing waves in dual-frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2017 , 26, 015007	3.5	20
40	Fast 2D fluid-analytical simulation of ion energy distributions and electromagnetic effects in multi-frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2014 , 23, 064003	3.5	19
39	Particle-in-cell and global simulations of E ₀ transition in atmospheric pressure Penning-dominated capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2014 , 23, 035014	3.5	18
38	Electron heating in low pressure capacitive discharges revisited. <i>Physics of Plasmas</i> , 2014 , 21, 123505	2.1	18
37	Linear electromagnetic excitation of an asymmetric low pressure capacitive discharge with unequal sheath widths. <i>Physics of Plasmas</i> , 2016 , 23, 013501	2.1	18
36	Hybrid model of neutral diffusion, sheaths, and the E ₀ transition in an atmospheric pressure He/H ₂ O bounded rf discharge. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 305203	3	13
35	A nonlinear electromagnetics model of an asymmetrically-driven, low pressure capacitive discharge. <i>Physics of Plasmas</i> , 2017 , 24, 083517	2.1	13
34	Comparison of a hybrid model with experiments in atmospheric pressure helium and argon capacitive rf discharges. <i>Plasma Sources Science and Technology</i> , 2014 , 23, 065048	3.5	12
33	Effect of a dielectric layer on plasma uniformity in high frequency electronegative capacitive discharges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017 , 35, 05C311	2.9	12

32	Analytical model of atmospheric pressure, helium/trace gas radio-frequency capacitive Penning discharges. <i>Plasma Sources Science and Technology</i> , 2015 , 24, 025009	3.5	12
31	Grounded radio-frequency electrodes in contact with high density plasmas. <i>Physics of Plasmas</i> , 2005 , 12, 103505	2.1	12
30	Modeling a metal vapor buffer-gas hollow cathode discharge. <i>Journal of Applied Physics</i> , 2000 , 87, 7191-7197	2.1	12
29	Experimental investigation of standing wave effect in dual-frequency capacitively coupled argon discharges: role of a low-frequency source. <i>Plasma Sources Science and Technology</i> , 2018 , 27, 055017	3.5	12
28	Symmetry breaking in high frequency, symmetric capacitively coupled plasmas. <i>Physics of Plasmas</i> , 2018 , 25, 093517	2.1	10
27	Two-dimensional particle-in-cell simulations of transport in a magnetized electronegative plasma. <i>Journal of Applied Physics</i> , 2010 , 108, 103305	2.5	9
26	2D fluid-analytical simulation of electromagnetic effects in low pressure, high frequency electronegative capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2016 , 25, 035007	3.5	9
25	Ion Energy and Angular Distribution in Biased Inductively Coupled Ar/O ₂ Discharges by Using a Hybrid Model. <i>Plasma Processes and Polymers</i> , 2017 , 14, 1600100	3.4	8
24	Standing striations due to ionization instability in atmospheric pressure He/H ₂ O radio frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2016 , 25, 054009	3.5	8
23	Instability-enhanced transport in low temperature magnetized plasma. <i>Physics of Plasmas</i> , 2019 , 26, 070702	2.1	7
22	Double layer formation in a two-region electronegative plasma. <i>Physics of Plasmas</i> , 2009 , 16, 122114	2.1	7
21	Photoresist etching in an inductively coupled, traveling wave driven, large area plasma source. <i>Journal of Applied Physics</i> , 2001 , 89, 869-877	2.5	7
20	High frequency reactive ion etching of silylated photoresist. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1994 , 12, 1351	2.1	7
19	Plasma Immersion Ion Implantation for Impurity Gettering in Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1989 , 147, 91	2.1	7
18	Ionization instability induced striations in low frequency and pulsed He/H ₂ O atmospheric pressure plasmas. <i>Physics of Plasmas</i> , 2018 , 25, 013535	2.1	6
17	Selective Copper Plating in Silicon Dioxide Trenches with Metal Plasma Immersion Ion Implantation. <i>Materials Research Society Symposia Proceedings</i> , 1991 , 223, 377	2.1	6
16	Effect of ion energy on photoresist etching in an inductively coupled, traveling wave driven, large area plasma source. <i>Journal of Applied Physics</i> , 2001 , 89, 5318-5321	2.5	5
15	Benchmarked and upgraded particle-in-cell simulations of a capacitive argon discharge at intermediate pressure: the role of metastable atoms. <i>Plasma Sources Science and Technology</i> , 2018 , 27, 055017	3.5	5

14	Ionization instability induced striations in atmospheric pressure He/H ₂ O RF and DC discharges. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 145204	3	4
13	Particle-in-cell simulations and passive bulk model of collisional capacitive discharge. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020 , 38, 023003	2.9	4
12	Cavity perturbation measurement of plasma density in complex geometry rf discharges. <i>Journal of Applied Physics</i> , 1989 , 66, 1618-1621	2.5	4
11	Particle-in-cell simulations of the alpha and gamma modes in collisional nitrogen capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2021 , 30, 035001	3.5	4
10	Hybrid model of atmospheric pressure Ar/O ₂ /TiCl ₄ radio-frequency capacitive discharge for TiO ₂ deposition. <i>Journal of Applied Physics</i> , 2014 , 115, 183302	2.5	3
9	Waves in expanding electronegative plasmas containing double layers. <i>Journal of Applied Physics</i> , 2010 , 107, 123301	2.5	3
8	Production of Alkali Plasmas by Photoionization. <i>Review of Scientific Instruments</i> , 1973 , 44, 35-37	1.7	3
7	Nonlinear harmonic excitations in collisional, asymmetrically-driven capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2021 , 30, 045017	3.5	2
6	Multi-mode ionization instability induced striations in RF driven He/H ₂ O atmospheric pressure plasma (APP) discharges. <i>Physics of Plasmas</i> , 2019 , 26, 093506	2.1	1
5	Narrow gap electronegative capacitive discharges. <i>Physics of Plasmas</i> , 2013 , 20, 101603	2.1	1
4	Structural and Interfacial Characteristics of thin (. <i>Materials Research Society Symposia Proceedings</i> , 1991 , 223, 75		1
3	Low impedance intense electron beam device. <i>Review of Scientific Instruments</i> , 1975 , 46, 1399-1401	1.7	1
2	Nonlinear transmission line (NTL) model study of electromagnetic effects in high-frequency asymmetrically driven capacitive discharges. <i>Physics of Plasmas</i> , 2022 , 29, 013508	2.1	1
1	Electron beam time-of-flight plasma potential diagnostic. <i>Review of Scientific Instruments</i> , 1988 , 59, 128-131		1