

Michael A Lieberman

List of Publications by Year in descending order

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87
papers

8,129
citations

109321

35
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98798

67
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88
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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. <i>Physics of Plasmas</i> , 2022, 29, 013508. | 1.9 | 3 |
| 2 | 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. | 3.1 | 9 |
| 3 | Nonlinear harmonic excitations in collisional, asymmetrically-driven capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2021, 30, 045017. | 3.1 | 8 |
| 4 | 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> , 2021, 30, 105009. | 3.1 | 24 |
| 5 | Surface effects in a capacitive argon discharge in the intermediate pressure regime. <i>Plasma Sources Science and Technology</i> , 2021, 30, 125011. | 3.1 | 9 |
| 6 | 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, . | 2.1 | 11 |
| 7 | Instability-enhanced transport in low temperature magnetized plasma. <i>Physics of Plasmas</i> , 2019, 26, . | 1.9 | 12 |
| 8 | 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. | 1.9 | 2 |
| 9 | Observation of Nonlinear Standing Waves Excited by Plasma-Series-Resonance-Enhanced Harmonics in Capacitive Discharges. <i>Physical Review Letters</i> , 2019, 122, 185002. | 7.8 | 38 |
| 10 | Ionization instability induced striations in low frequency and pulsed He/H ₂ O atmospheric pressure plasmas. <i>Physics of Plasmas</i> , 2018, 25, . | 1.9 | 7 |
| 11 | Symmetry breaking in high frequency, symmetric capacitively coupled plasmas. <i>Physics of Plasmas</i> , 2018, 25, 093517. | 1.9 | 14 |
| 12 | 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. | 3.1 | 20 |
| 13 | 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. | 3.0 | 14 |
| 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. | 2.8 | 5 |
| 15 | A nonlinear electromagnetics model of an asymmetrically-driven, low pressure capacitive discharge. <i>Physics of Plasmas</i> , 2017, 24, . | 1.9 | 21 |
| 16 | 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, . | 2.1 | 14 |
| 17 | Nonlinear series resonance and standing waves in dual-frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2017, 26, 015007. | 3.1 | 28 |
| 18 | Linear electromagnetic excitation of an asymmetric low pressure capacitive discharge with unequal sheath widths. <i>Physics of Plasmas</i> , 2016, 23, . | 1.9 | 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. | 3.1 | 14 |
| 20 | Standing striations due to ionization instability in atmospheric pressure He/H ₂ O radio frequency capacitive discharges. Plasma Sources Science and Technology, 2016, 25, 054009. | 3.1 | 10 |
| 21 | Analytical model of atmospheric pressure, helium/trace gas radio-frequency capacitive Penning discharges. Plasma Sources Science and Technology, 2015, 24, 025009. | 3.1 | 16 |
| 22 | Nonlinear standing wave excitation by series resonance-enhanced harmonics in low pressure capacitive discharges. Plasma Sources Science and Technology, 2015, 24, 055011. | 3.1 | 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. | 3.1 | 29 |
| 24 | Electron heating in low pressure capacitive discharges revisited. Physics of Plasmas, 2014, 21, 123505. | 1.9 | 24 |
| 25 | Hybrid model of atmospheric pressure Ar/O ₂ /TiCl ₄ radio-frequency capacitive discharge for TiO ₂ deposition. Journal of Applied Physics, 2014, 115, . | 2.5 | 4 |
| 26 | Particle-in-cell and global simulations of I_{\pm} to I^3 transition in atmospheric pressure Penning-dominated capacitive discharges. Plasma Sources Science and Technology, 2014, 23, 035014. | 3.1 | 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. | 3.1 | 13 |
| 28 | Hybrid model of neutral diffusion, sheaths, and the I_{\pm} to I^3 transition in an atmospheric pressure He/H ₂ O bounded rf discharge. Journal Physics D: Applied Physics, 2014, 47, 305203. | 2.8 | 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. | 3.1 | 77 |
| 30 | Narrow gap electronegative capacitive discharges. Physics of Plasmas, 2013, 20, 101603. | 1.9 | 2 |
| 31 | Analytical numerical global model of atmospheric-pressure radio-frequency capacitive discharges. Plasma Sources Science and Technology, 2012, 21, 035013. | 3.1 | 51 |
| 32 | $\frac{Ar}{Xe} + \frac{Ar}{Xe}$ Velocities near the Presheath-Sheath Boundary in an Ar capacitive discharge. Plasma Sources Science and Technology, 2011, 20, 035009. | 7.8 | 30 |
| 33 | Fast 2D hybrid fluid-analytical simulation of inductive/capacitive discharges. Plasma Sources Science and Technology, 2011, 20, 035009. | 3.1 | 47 |
| 34 | Two-dimensional particle-in-cell simulations of transport in a magnetized electronegative plasma. Journal of Applied Physics, 2010, 108, 103305. | 2.5 | 9 |
| 35 | Waves in expanding electronegative plasmas containing double layers. Journal of Applied Physics, 2010, 107, 123301. | 2.5 | 3 |
| 36 | Double layer formation in a two-region electronegative plasma. Physics of Plasmas, 2009, 16, 122114. | 1.9 | 7 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | 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. | 7.8 | 160 |
| 38 | Modeling electromagnetic effects in capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2008, 17, 015018. | 3.1 | 82 |
| 39 | The effects of nonlinear series resonance on Ohmic and stochastic heating in capacitive discharges. <i>Physics of Plasmas</i> , 2008, 15, . | 1.9 | 87 |
| 40 | Theory of a double-layer in an expanding electronegative plasma. <i>Physics of Plasmas</i> , 2007, 14, . | 1.9 | 37 |
| 41 | Stochastic heating in single and dual frequency capacitive discharges. <i>Physics of Plasmas</i> , 2006, 13, 053506. | 1.9 | 150 |
| 42 | Inductive heating and E to H transitions in high frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2006, 15, S130-S136. | 3.1 | 55 |
| 43 | Inductive Heating and EtoH Transitions in Capacitive Discharges. <i>Physical Review Letters</i> , 2005, 95, 205001. | 7.8 | 58 |
| 44 | Grounded radio-frequency electrodes in contact with high density plasmas. <i>Physics of Plasmas</i> , 2005, 12, 103505. | 1.9 | 15 |
| 45 | Self-consistent nonlinear transmission line model of standing wave effects in a capacitive discharge. <i>Physics of Plasmas</i> , 2004, 11, 1775-1785. | 1.9 | 99 |
| 46 | Dynamics of steady and unsteady operation of inductive discharges with attaching gases. <i>Journal of Applied Physics</i> , 2003, 94, 831-843. | 2.5 | 31 |
| 47 | Self-consistent discharge characteristics of collisional helicon plasmas. <i>Physics of Plasmas</i> , 2003, 10, 882-890. | 1.9 | 34 |
| 48 | Radical dynamics in unstable CF ₄ inductive discharges. <i>Journal of Applied Physics</i> , 2003, 94, 76-84. | 2.5 | 31 |
| 49 | Standing wave and skin effects in large-area, high-frequency capacitive discharges. <i>Plasma Sources Science and Technology</i> , 2002, 11, 283-293. | 3.1 | 324 |
| 50 | 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 | 8 |
| 51 | 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 | 6 |
| 52 | Effect of Ar addition to an O ₂ plasma in an inductively coupled, traveling wave driven, large area plasma source: O ₂ /Ar mixture plasma modeling and photoresist etching. <i>Journal of Applied Physics</i> , 2001, 90, 3205-3211. | 2.5 | 73 |
| 53 | Modeling a metal-vapor buffer-gas hollow cathode discharge. <i>Journal of Applied Physics</i> , 2000, 87, 7191-7197. | 2.5 | 12 |
| 54 | Instabilities in low-pressure inductive discharges with attaching gases. <i>Applied Physics Letters</i> , 1999, 75, 3617-3619. | 3.3 | 63 |

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|----|---|-----|-----------|
| 55 | Internal sheaths in electronegative discharges. <i>Journal of Applied Physics</i> , 1999, 86, 4142-4153. | 2.5 | 71 |
| 56 | Magnetic induction and plasma impedance in a planar inductive discharge. <i>Plasma Sources Science and Technology</i> , 1998, 7, 83-95. | 3.1 | 30 |
| 57 | 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. | 2.1 | 95 |
| 58 | Role of etch products in polysilicon etching in a high-density chlorine discharge. <i>Plasma Chemistry and Plasma Processing</i> , 1996, 16, 99-120. | 2.4 | 158 |
| 59 | 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. | 2.1 | 469 |
| 60 | 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. | 2.1 | 248 |
| 61 | 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. | 1.6 | 9 |
| 62 | Global Model of Plasma Chemistry in a High Density Oxygen Discharge. <i>Journal of the Electrochemical Society</i> , 1994, 141, 1546-1555. | 2.9 | 211 |
| 63 | 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. | 3.1 | 101 |
| 64 | 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. | 2.1 | 26 |
| 65 | Self-consistent electron cyclotron resonance absorption in a plasma with varying parameters. <i>Journal of Applied Physics</i> , 1992, 72, 3924-3933. | 2.5 | 31 |
| 66 | 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 | 168 |
| 67 | Sheath voltage ratio for asymmetric rf discharges. <i>Journal of Applied Physics</i> , 1991, 69, 3823-3829. | 2.5 | 42 |
| 68 | Structural and Interfacial Characteristics of thin (<10 nm) SiO ₂ Films Grown by Electron Cyclotron Resonance Plasma Oxidation on [100] Si Substrates. <i>Materials Research Society Symposia Proceedings</i> , 1991, 223, 75. | 0.1 | 1 |
| 69 | Selective Copper Plating in Silicon Dioxide Trenches with Metal Plasma Immersion Ion Implantation. <i>Materials Research Society Symposia Proceedings</i> , 1991, 223, 377. | 0.1 | 7 |
| 70 | 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. | 2.1 | 62 |
| 71 | Electron beam probe measurements of electric fields in rf discharges. <i>Journal of Applied Physics</i> , 1990, 68, 6117-6124. | 2.5 | 54 |
| 72 | Kinetics of photoresist etching in an electron cyclotron resonance plasma. <i>Journal of Applied Physics</i> , 1990, 68, 1859-1865. | 2.5 | 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. | 2.1 | 57 |
| 74 | Cavity perturbation measurement of plasma density in complex geometry rf discharges. Journal of Applied Physics, 1989, 66, 1618-1621. | 2.5 | 4 |
| 75 | Spherical shell model of an asymmetric rf discharge. Journal of Applied Physics, 1989, 65, 4186-4191. | 2.5 | 90 |
| 76 | Model of plasma immersion ion implantation. Journal of Applied Physics, 1989, 66, 2926-2929. | 2.5 | 279 |
| 77 | Macroscopic modeling of radio-frequency plasma discharges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1989, 7, 1007-1013. | 2.1 | 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. | 2.1 | 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. | 2.1 | 97 |
| 81 | Electron beam time-of-flight plasma potential diagnostic. Review of Scientific Instruments, 1988, 59, 128-131. | 1.3 | 0 |
| 82 | Self-consistent stochastic electron heating in radio frequency discharges. Journal of Applied Physics, 1988, 64, 4375-4383. | 2.5 | 78 |
| 83 | Stochasticity and resonances in the two beam accelerator. AIP Conference Proceedings, 1987, , . | 0.4 | 0 |
| 84 | Many-dimensional Hamiltonian systems. , 1987, , . | | 0 |
| 85 | Low impedance intense electron beam device. Review of Scientific Instruments, 1975, 46, 1399-1401. | 1.3 | 1 |
| 86 | Production of Alkali Plasmas by Photoionization. Review of Scientific Instruments, 1973, 44, 35-37. | 1.3 | 3 |
| 87 | Shielding of moving test particles in warm, isotropic plasma. Journal of Plasma Physics, 1973, 9, 311-324. | 2.1 | 47 |