Laxminarayan L Raja

List of Publications by Year
in descending order

87	1,353	394421 19	395702 33
papers	citations	h-index	g-index

87	87	87	812
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Control of unsteadiness of a shock wave/turbulent boundary layer interaction by using a pulsed-plasma-jet actuator. Physics of Fluids, 2012, 24, .	4.0	153
2	Two-dimensional simulation of a direct-current microhollow cathode discharge. Journal of Applied Physics, 2005, 97, 043305.	2.5	74
3	Fluid modeling of electron heating in low-pressure, high-frequency capacitively coupled plasma discharges. Journal of Applied Physics, 2004, 96, 6073-6081.	2.5	71
4	Modeling of Mode Transition Behavior in Argon Microhollow Cathode Discharges. Plasma Processes and Polymers, 2009, 6, 335-346.	3.0	62
5	Dynamics of pulse phenomena in helium dielectric-barrier atmospheric-pressure glow discharges. Journal of Applied Physics, 2003, 94, 7408.	2.5	55
6	A numerical study of high-pressure non-equilibrium streamers for combustion ignition application. Journal of Applied Physics, 2013, 114, .	2.5	53
7	Role of trace impurities in large-volume noble gas atmospheric-pressure glow discharges. Applied Physics Letters, 2002, 81, 814-816.	3.3	49
8	Simulations of direct-current air glow discharge at pressures â^¼1â€‚Torr: Discharge model validation. Journal of Applied Physics, 2010, 107, .	2.5	44
9	Structure of direct-current microdischarge plasmas in helium. Applied Physics Letters, 2003, 82, 529-531.	3.3	33
10	Breakdown of atmospheric pressure microgaps at high excitation frequencies. Journal of Applied Physics, 2015, 117, .	2.5	32
11	Fully coupled modeling of nanosecond pulsed plasma assisted combustion ignition. Journal Physics D: Applied Physics, 2019, 52, 095204.	2.8	32
12	Computational modeling study of the radial line slot antenna microwave plasma source with comparisons to experiments. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	2.1	30
13	Electromagnetic wave energy flow control with a tunable and reconfigurable coupled plasma split-ring resonator metamaterial: A study of basic conditions and configurations. Journal of Applied Physics, 2016, 119, .	2.5	30
14	Early stage time evolution of a dense nanosecond microdischarge used in fast optical switching applications. Physics of Plasmas, 2015, 22, .	1.9	29
15	Run-to-run variations, asymmetric pulses, and long time-scale transient phenomena in dielectric-barrier atmospheric pressure glow discharges. Journal Physics D: Applied Physics, 2007, 40, 3145-3154.	2.8	27
16	Modeling non-equilibrium discharge and validating transient plasma characteristics at above-atmospheric pressure. Plasma Sources Science and Technology, 2018, 27, 124006.	3.1	26
17	Simulations of Nanosecond Pulsed Plasmas in Supersonic Flows for Combustion Applications. AIAA Journal, 2012, 50, 647-658.	2.6	24
18	Fluid versus global model approach for the modeling of active species production by streamer discharge. Plasma Sources Science and Technology, 2017, 26, 035003.	3.1	23

#	Article	IF	Citations
19	High-voltage microdischarge as a source of extreme density plasma. Physics of Plasmas, 2018, 25, .	1.9	21
20	The influence of pressure, fluid flow, and chemistry on the combustion-based oxidation of silicon. Proceedings of the Combustion Institute, 2000, 28, 1381-1388.	3.9	20
21	Modeling of a Dielectric-Barrier Discharge-Based Cold Plasma Combustion Ignition System. IEEE Transactions on Plasma Science, 2019, 47, 410-418.	1.3	19
22	Influence of field emission on the propagation of cylindrical fast ionization wave in atmospheric-pressure nitrogen. Journal of Applied Physics, 2016, 119, 153301.	2.5	18
23	Electron kinetics in atmospheric-pressure argon and nitrogen microwave microdischarges. Journal of Applied Physics, 2016, 119, .	2.5	18
24	On the production of energetic electrons at the negative streamer head at moderate overvoltage. Physics of Plasmas, 2017, 24, 124503.	1.9	18
25	Simulation of Direct-Current Surface Plasma Discharge Phenomena in High-Speed Flow Actuation. IEEE Transactions on Plasma Science, 2007, 35, 1301-1311.	1.3	17
26	Fluid modeling of a high-voltage nanosecond pulsed xenon microdischarge. Physics of Plasmas, 2016, 23, 073513.	1.9	17
27	Effect of frequency on microplasmas driven by microwave excitation. Journal of Applied Physics, 2015, 118, 043303.	2.5	16
28	Power balance and wall erosion measurements in a helicon plasma. Physics of Plasmas, 2010, 17, 033503.	1.9	15
29	Microwave plasmas generated in bubbles immersed in liquids for hydrocarbons reforming. Journal Physics D: Applied Physics, 2016, 49, 22LT01.	2.8	15
30	Computational modeling of a single microdischarge and its interactions with high frequency electromagnetic waves. Journal Physics D: Applied Physics, 2016, 49, 345501.	2.8	14
31	Measurements and modeling of the impact of radical recombination on silicon nitride growth in microwave plasma assisted atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	14
32	Numerical investigation of nanosecond pulsed discharge in air at above-atmospheric pressures. Journal Physics D: Applied Physics, 2018, 51, 345201.	2.8	14
33	Multi-dimensional Modeling of Non-equilibrium Plasma for Automotive Applications. , 0, , .		13
34	Magneto-hydrodynamics simulation study of deflagration mode in co-axial plasma accelerators. Physics of Plasmas, 2014, 21, 012104.	1.9	12
35	Modeling of thermalization phenomena in coaxial plasma accelerators. Journal Physics D: Applied Physics, 2018, 51, 215203.	2.8	12
36	Computational modeling of the effect of external electron injection into a direct-current microdischarge. Journal of Applied Physics, 2015, 118, .	2.5	11

#	Article	IF	Citations
37	Modeling of gas breakdown and early transients of plasma evolution in cylindrical all-dielectric resonators. Journal Physics D: Applied Physics, 2017, 50, 474003.	2.8	11
38	Limitations of the effective field approximation for fluid modeling of high frequency discharges in atmospheric pressure air: Application in resonant structures. Physics of Plasmas, 2017, 24, 112105.	1.9	11
39	Microwave microplasma parameters at extremely high driving frequencies. Physics of Plasmas, 2019, 26, .	1.9	10
40	Computational analysis of gas breakdown modes in direct current micro-plasmas at elevated pressures. Journal of Applied Physics, 2020, 128, 233301.	2.5	10
41	Dynamics of a wire-to-cylinder atmospheric pressure high-voltage nanosecond discharge. Physics of Plasmas, 2015, 22, .	1.9	9
42	Multidimensional modeling of non-equilibrium plasma generated by a radio-frequency corona discharge. Plasma Sources Science and Technology, 2020, 29, 115013.	3.1	9
43	Fluid modeling of inductively coupled iodine plasma for electric propulsion conditions. Journal of Applied Physics, 2021, 130, .	2.5	9
44	Simulation of a Direct-Current Microdischarge for the Micro Plasma Thruster. IEEE Transactions on Plasma Science, 2008, 36, 1200-1201.	1.3	8
45	Experimentally validated computations of simultaneous ion and fast neutral energy and angular distributions in a capacitively coupled plasma reactor. Journal Physics D: Applied Physics, 2020, 53, 435209.	2.8	8
46	Influence of field emission on microwave microdischarges. High Voltage, 2016, 1, 57-59.	4.7	7
47	Measurement of Velocity Induced by a Propagating Arc Magneto-hydrodynamic Plasma Actuator. , 2017, , .		7
48	Magnetized direct current microdischarge I. Effect of the gas pressure. Journal of Applied Physics, 2017, 121, 093302.	2.5	7
49	Self-pulsing of direct-current discharge in planar and curved geometries. Journal Physics D: Applied Physics, 2021, 54, 235201.	2.8	7
50	Computational study of plasma dynamics and reactive chemistry in a low-pressure inductively coupled CF4/O2 plasma. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	1.2	7
51	Schlieren Imaging of Flow Actuation Produced by Direct-Current Surface Glow Discharge in Supersonic Flows. IEEE Transactions on Plasma Science, 2008, 36, 1316-1317.	1.3	6
52	Dynamics of Surface Streamer Plasmas at Atmospheric Pressure: Mixtures of Argon and Methane. IEEE Transactions on Plasma Science, 2017, 45, 1776-1787.	1.3	6
53	Effect of oxygen impurities on atmospheric-pressure surface streamer discharge in argon for large gap arc breakdown. Physics of Plasmas, 2016, 23, 103501.	1.9	5
54	Influence of emitter temperature on the energy deposition in a low-pressure plasma. Physics of Plasmas, 2016, 23, 032107.	1.9	5

#	Article	IF	Citations
55	Kinetic modeling of streamer penetration into de-ionized water. Physics of Plasmas, 2018, 25, 033515.	1.9	5
56	Nonlinear hydrodynamic effects in dense microplasmas interacting with microwaves. Journal of Applied Physics, 2018, 124, .	2.5	5
57	Surface kinetics and feature scale particle model of SixNy atomic layer deposition using Si2Cl6 precursor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	5
58	Dynamics of subnormal regime in a direct-current nitrogen micro-discharge. Physics of Plasmas, 2022, 29, 023503.	1.9	5
59	Influence of electron energy distribution on fluid models of a low-pressure inductively coupled plasma discharge. Physics of Plasmas, 2022, 29, .	1.9	5
60	Particle-in-cell modeling of gas-confined barrier discharge. Physics of Plasmas, 2016, 23, .	1.9	4
61	Kinetic effects during the interaction between high density microplasma and electromagnetic wave. Physics of Plasmas, 2017, 24, 043509.	1.9	4
62	Magnetized direct current microdischarge. II. Effect of magnetic field amplitude on the plasma. Journal of Applied Physics, 2017, 121, .	2.5	4
63	Static stall alleviation using a rail plasma actuator. Journal Physics D: Applied Physics, 2018, 51, 265201.	2.8	4
64	Cathode-sheath driven low-speed aerodynamic flow actuation using direct-current surface glow discharges. Journal of Electrostatics, 2010, 68, 453-457.	1.9	3
65	Modeling of plasma combustion ignition on an electromagnetic wave driven metasurface. Journal Physics D: Applied Physics, 2020, 53, 245202.	2.8	3
66	VizGrain: a new computational tool for particle simulations of reactive plasma discharges and rarefied flow physics. Plasma Sources Science and Technology, 2021, 30, 055012.	3.1	3
67	Direct-simulation Monte Carlo modeling of reactor-scale gas-dynamic phenomena in a multiwafer atomic-layer deposition batch reactor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	3
68	Modeling the effect of stochastic heating and surface chemistry in a pure CF4 inductively coupled plasma. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	1.2	3
69	Plasma kinetics of c-C4F8 inductively coupled plasma revisited. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, 022203.	1.2	3
70	Approach for control of high-density plasma reactors through optimal pulse shaping. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1722-1732.	2.1	2
71	The effect of electron processes on metal walls in magnetized microdischarges. Journal of Applied Physics, 2017, 122, .	2.5	2
72	Modeling of microwave surface plasmas on the meta-surface at atmospheric pressure. , 2019, , .		2

#	Article	IF	Citations
73	Particle-in-cell Monte Carlo-collision modeling of non-ideal effects in wave-heated dense microplasmas. Physics of Plasmas, 2021, 28, .	1.9	2
74	Operating modes of a magnetized direct-current discharge in helium at pressures â^¼10â€‰Pa. Journal of Applied Physics, 2021, 129, 183307.	2.5	2
75	Optimization of silicon etch rate in a CF4/Ar/O2 inductively coupled plasma. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, .	1.2	2
76	Transient phenomena during dense argon micro-plasma formation. Journal Physics D: Applied Physics, 0, , .	2.8	2
77	Response to â€œComment on â€˜Early stage time evolution of a dense nanosecond microdischarge used in fast optical switching applicationsâ€™â€•[Phys. Plasmas 23, 034705 (2016)]. Physics of Plasmas, 2016, 23, 034706.	1.9	1
78	Experimental and Numerical Investigations of a Pulsed Nanosecond Streamer Discharge in CO2. , 2017, , .		1
79	Modeling Gas Breakdown in High Quality Factor Resonators at GHz to THz Frequencies. , 2019, , .		1
80	Spoof plasmonic Brewster angle transmission for broadband electromagnetic energy squeezing in the microwave regime. Journal of Applied Physics, 2020, 128, .	2.5	1
81	The effect of strong oscillating magnetic fields on electron transport properties in high-frequency discharges. Journal Physics D: Applied Physics, 2020, 53, 265203.	2.8	1
82	Computational study of a novel microwave excited plasma sensor for aerodynamic flows. Journal of Applied Physics, 2021, 129, 084503.	2.5	1
83	Modeling of atmospheric gas-stream processing using a microwave excited all-dielectric resonant plasma discharge. Journal Physics D: Applied Physics, 2021, 54, 434005.	2.8	1
84	Population of vibrational levels of carbon dioxide by cylindrical fast ionization wave. Physics of Plasmas, 2017, 24, 093513.	1.9	0
85	Simulation of Chemically Reacting Flow in Plasma Native Oxide Cleaning Process. , 2019, , .		0
86	Cyclic Self-Limiting Etching of Organic Polymers. ACS Applied Polymer Materials, 2021, 3, 3636-3648.	4.4	0
87	Influence of the electron kinetics on Ar/NF₃ inductively coupled plasma. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, 042202.	1.2	0