Luis L Alves

List of Publications by Year
in descending order

86 papers	2,614 citations	185998 28 h-index	197535 49 g-index
89 all docs	89 docs citations	89 times ranked	1623 citing authors

#	Article	IF	Citations
1	LXCat: an Openâ€Access, Webâ€Based Platform for Data Needed for Modeling Low Temperature Plasmas. Plasma Processes and Polymers, 2017, 14, 1600098.	1.6	188
2	The 2022 Plasma Roadmap: low temperature plasma science and technology. Journal Physics D: Applied Physics, 2022, 55, 373001.	1.3	139
3	An update of argon inelastic cross sections for plasma discharges. Journal Physics D: Applied Physics, 2005, 38, 1588-1598.	1.3	129
4	The IST-LISBON database on LXCat. Journal of Physics: Conference Series, 2014, 565, 012007.	0.3	127
5	Foundations of modelling of nonequilibrium low-temperature plasmas. Plasma Sources Science and Technology, 2018, 27, 023002.	1.3	92
6	Electron-neutral scattering cross sections for CO₂: a complete and consistent set and an assessment of dissociation. Journal Physics D: Applied Physics, 2016, 49, 395207.	1.3	90
7	A collisional-radiative model for microwave discharges in helium at low and intermediate pressures. Journal Physics D: Applied Physics, 1992, 25, 1713-1732.	1.3	86
8	Two-dimensional fluid modelling of charged particle transport in radio-frequency capacitively coupled discharges. Plasma Sources Science and Technology, 2002, 11, 448-465.	1.3	84
9	Systematic characterization of low-pressure capacitively coupled hydrogen discharges. Journal of Applied Physics, 2004, 95, 4605-4620.	1.1	80
10	The LisbOn KInetics Boltzmann solver. Plasma Sources Science and Technology, 2019, 28, 043001.	1.3	79
11	Modeling of low-pressure microwave discharges in Ar, He, and O/sub 2/: similarity laws for the maintenance field and mean power transfer. IEEE Transactions on Plasma Science, 1991, 19, 229-239.	0.6	78
12	Self-contained solution to the spatially inhomogeneous electron Boltzmann equation in a cylindrical plasma positive column. Physical Review E, 1997, 55, 890-906.	0.8	77
13	Towards large-scale in free-standing graphene and N-graphene sheets. Scientific Reports, 2017, 7, 10175.	1.6	71
14	Comparisons of sets of electronâ€“neutral scattering cross sections and swarm parameters in noble gases: I. Argon. Journal Physics D: Applied Physics, 2013, 46, 334001.	1.3	70
15	Electron kinetics in weakly ionized helium under DC and HF applied electric fields. Journal Physics D: Applied Physics, 1991, 24, 581-592.	1.3	69
16	Two-dimensional modelling of - radio-frequency discharges for a-Si:H deposition. Plasma Sources Science and Technology, 1998, 7, 348-358.	1.3	68
17	Modelling N₂â€“O₂ plasmas: volume and surface kinetics. Plasma Sources Science and Technology, 2019, 28, 073001.	1.3	66
18	Comparisons of sets of electronâ€“neutral scattering cross sections and swarm parameters in noble gases: II. Helium and neon. Journal Physics D: Applied Physics, 2013, 46, 334002.	1.3	61

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19	The case for<i>in situ</i>resource utilisation for oxygen production on Mars by non-equilibrium plasmas. Plasma Sources Science and Technology, 2017, 26, 11LT01.	1.3	51
20	Global model and diagnostic of a low-pressure SF6/Ar inductively coupled plasma. Plasma Sources Science and Technology, 2009, 18, 025001.	1.3	50
21	Capacitively coupled radio-frequency hydrogen discharges: The role of kinetics. Journal of Applied Physics, 2007, 102, 063305.	1.1	47
22	The European Integrated Tokamak Modelling (ITM) effort: achievements and first physics results. Nuclear Fusion, 2014, 54, 043018.	1.6	45
23	Fluid modelling of the positive column of direct-current glow discharges. Plasma Sources Science and Technology, 2007, 16, 557-569.	1.3	43
24	Numerical Modeling of a Heâ€“N2 Capillary Surface Wave Discharge at Atmospheric Pressure. Plasma Chemistry and Plasma Processing, 2000, 20, 183-207.	1.1	39
25	Capacitively coupled radio-frequency discharges in nitrogen at low pressures. Plasma Sources Science and Technology, 2012, 21, 045008.	1.3	38
26	Comparisons of sets of electronâ€“neutral scattering cross sections and swarm parameters in noble gases: III. Krypton and xenon. Journal Physics D: Applied Physics, 2013, 46, 334003.	1.3	35
27	Influence of N₂on the CO₂vibrational distribution function and dissociation yield in non-equilibrium plasmas. Journal Physics D: Applied Physics, 2020, 53, 094002.	1.3	31
28	Microwave capillary plasmas in helium at atmospheric pressure. Journal Physics D: Applied Physics, 2014, 47, 265201.	1.3	30
29	Electron scattering cross sections for the modelling of oxygen-containing plasmas*. European Physical Journal D, 2016, 70, 1.	0.6	30
30	Self-consistent modelling of atmospheric micro-plasmas produced by a microwave source. Plasma Sources Science and Technology, 2012, 21, 015013.	1.3	29
31	Generation and confinement of microwave gas-plasma in photonic dielectric microstructure. Optics Express, 2013, 21, 25509.	1.7	28
32	Microwave air plasmas in capillaries at low pressure I. Self-consistent modeling. Journal Physics D: Applied Physics, 2016, 49, 235207.	1.3	28
33	Mars in situ oxygen and propellant production by non-equilibrium plasmas. Plasma Sources Science and Technology, 2021, 30, 065005.	1.3	27
34	Numerical analysis of JET discharges with the European Transport Simulator. Nuclear Fusion, 2013, 53, 123007.	1.6	26
35	A reaction mechanism for vibrationally-cold low-pressure CO₂ plasmas. Plasma Sources Science and Technology, 2020, 29, 125020.	1.3	26
36	Design of a Microwave Microplasma Source at Atmospheric Pressure. IEEE Transactions on Plasma Science, 2009, 37, 797-808.	0.6	24

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37	Modeling of surface-wave discharges with cylindrical symmetry. Physical Review E, 2009, 79, 016403.	0.8	23
38	Electron impact cross sections for carbon monoxide and their importance in the electron kinetics of CO₂â€“CO mixtures. Plasma Sources Science and Technology, 2020, 29, 015002.	1.3	23
39	The role of rotational mechanisms in electron swarm parameters at low reduced electric field in N₂, O₂and H₂. Plasma Sources Science and Technology, 2015, 24, 035002.	1.3	21
40	Two-dimensional electromagnetic model of a microwave plasma reactor operated by an axial injection torch. Journal of Applied Physics, 2007, 101, 103303.	1.1	20
41	Fluid modelling of capacitively coupled radio-frequency discharges: a review. Plasma Physics and Controlled Fusion, 2012, 54, 124012.	0.9	20
42	On the quasi-stationary approach to solve the electron Boltzmann equation in pulsed plasmas. Plasma Sources Science and Technology, 2021, 30, 065008.	1.3	19
43	Calculated Plasma Parameters and Excitation Spectra of High-Pressure Helium Discharges. Plasma Chemistry and Plasma Processing, 1999, 19, 467-486.	1.1	18
44	Microwave microplasma sources based on microstrip-like transmission lines. European Physical Journal D, 2010, 60, 627-635.	0.6	17
45	Microwave-driven plasmas in hollow-core photonic crystal fibres. Plasma Sources Science and Technology, 2014, 23, 015022.	1.3	14
46	N-Graphene-Metal-Oxide(Sulfide) hybrid Nanostructures: Single-step plasma-enabled approach for energy storage applications. Chemical Engineering Journal, 2022, 430, 133153.	6.6	13
47	Microwave air plasmas in capillaries at low pressure II. Experimental investigation. Journal Physics D: Applied Physics, 2016, 49, 435202.	1.3	12
48	Nonequilibrium positive column revisited. IEEE Transactions on Plasma Science, 2003, 31, 572-586.	0.6	11
49	Modeling of an axial injection torch. EPJ Applied Physics, 2009, 46, 21001.	0.3	10
50	N2â€“H2 capacitively coupled radio-frequency discharges at low pressure. Part I. Experimental results: effect of the H2 amount on electrons, positive ions and ammonia formation. Plasma Sources Science and Technology, 2020, 29, 085019.	1.3	10
51	Experimental study of micro electrical discharge machining discharges. Journal of Applied Physics, 2013, 113, 233301.	1.1	9
52	Gas mixture for deep-UV plasma emission in a hollow-core photonic crystal fiber. Optics Letters, 2017, 42, 3363.	1.7	9
53	N₂â€“H₂ capacitively coupled radio-frequency discharges at low pressure: II. Modeling results: the relevance of plasma-surface interaction. Plasma Sources Science and Technology, 2020, 29, 085023.	1.3	9
54	Simulation of pulsed high-frequency breakdown in hydrogen. Journal of Applied Physics, 2000, 88, 3170-3181.	1.1	8

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55	Effect of anisotropic scattering for rotational collisions on electron transport parameters in CO. Plasma Sources Science and Technology, 0, , .	1.3	8
56	Hydrodynamic study of a microwave plasma torch. EPJ Applied Physics, 2011, 56, 24008.	0.3	6
57	Extreme ultraviolet radiation emitted by helium microwave driven plasmas. Journal of Applied Physics, 2016, 119, 243305.	1.1	6
58	Study of Gas Heating by a Microwave Plasma Torch. Journal of Modern Physics, 2012, 03, 1603-1615.	0.3	6
59	Charged particle transport modelling in silaneâ€“hydrogen radio-frequency capacitively coupled discharges. Vacuum, 2002, 69, 213-219.	1.6	5
60	Electron-drift detection using directional planar probes in a low-pressure coaxial surface-wave discharge. Applied Physics Letters, 2006, 89, 241502.	1.5	5
61	CAPACITIVELY COUPLED HYDROGEN DISCHARGES: MODELING VS. EXPERIMENT. High Temperature Material Processes, 2004, 8, 499-518.	0.2	5
62	Fluid description of the energy absorption in microwave discharges: a new perspective. EPJ Applied Physics, 2004, 26, 195-201.	0.3	4
63	Special Issue on Numerical Modelling of Lowâ€Temperature Plasmas for Various Applications â€" Part I: Review and Tutorial Papers on Numerical Modelling Approaches. Plasma Processes and Polymers, 2017, 14, 1690011.	1.6	4
64	Fluid modeling of a microwave micro-plasma at atmospheric pressure. EPJ Applied Physics, 2010, 49, 13102.	0.3	3
65	Electrical Characterization of Capacitively Coupled Radio Frequency Discharges in Hydrogen. Plasma Processes and Polymers, 2007, 4, S937-S941.	1.6	2
66	Images of the Electromagnetic-Field Distribution in a Microwave Reactor Excited by an Axial Injection Torch. IEEE Transactions on Plasma Science, 2008, 36, 1378-1379.	0.6	2
67	Special issue on numerical modelling of lowâ€temperature plasmas for various applications â€" part II: Research papers on numerical modelling for various plasma applications. Plasma Processes and Polymers, 2017, 14, 1790041.	1.6	2
68	Nonlocal Electron Kinetics in DC Discharges. European Physical Journal Special Topics, 1997, 07, C4-143-C4-154.	0.2	1
69	Numerical solution to an electromagnetic model with Neumann boundary conditions, for a microwave-driven plasma reactor. Journal Physics D: Applied Physics, 2008, 41, 215204.	1.3	1
70	Fluid modeling of a microwave micro-plasma at atmospheric pressure. EPJ Applied Physics, 2010, 50, 21601.	0.3	1
71	Fast Time-Relaxation Algorithm to Solve Plasma Fluid Equations. IEEE Transactions on Plasma Science, 2010, 38, 2312-2321.	0.6	1
72	Images of Atmospheric-Pressure Microplasmas Produced by Continuous 2.45-GHz Excitation. IEEE Transactions on Plasma Science, 2011, 39, 2674-2675.	0.6	1

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73	Special issue on Plasma Processes. EPJ Applied Physics, 2011, 56, 24001.	0.3	1
74	Double sheaths in RF discharges. IEEE Transactions on Plasma Science, 2005, 33, 358-359.	0.6	0
75	Modelling of a CCP-RF Discharge Used For The Simulation Of Titanâ€™s Chemistry. AIP Conference Proceedings, 2008, , .	0.3	0
76	Special Issue on the Numerical Simulation of Plasmas. IEEE Transactions on Plasma Science, 2010, 38, 2082-2084.	0.6	0
77	Focus on Plasma Processes. EPJ Applied Physics, 2010, 49, 13101.	0.3	0
78	Electromagnetic modeling of axis-symmetric microwave devices. Journal of Physics: Conference Series, 2010, 207, 012027.	0.3	0
79	Towards a plasma-core PCF for tunable UV-DUV radiation. , 2015, , .		0
80	Deep-UV plasma emission in hollow-core photonic crystal fiber. , 2017, , .		0
81	Reply to Comment on â€˜The case forin situresource utilisation for oxygen production on Mars by non-equilibrium plasmasâ€™. Plasma Sources Science and Technology, 2018, 27, 028002.	1.3	0
82	Tunable Deep UV to UV radiation source in plasma-core fiber. , 2018, , .		0
83	Topical issue â€œPlasma Sources and Plasma Processes (PSPP)â€. EPJ Applied Physics, 2018, 82, 10801.	0.3	0
84	Sensitivity Analysis in Plasma Chemistry: Application to Oxygen Cold Plasmas and the LoKI Simulation Tool. Journal of Physical Chemistry A, 2020, 124, 4354-4366.	1.1	0
85	Micro-confinement of microwave-plasma in photonic structures. , 2013, , .		0
86	Calculation of spatially inhomogeneous electron distribution functions. European Physical Journal Special Topics, 1998, 08, Pr7-33-Pr7-42.	0.2	0