Luis O Silva

List of Publications by Year
in descending order

308	12,024	28274	31849
papers	citations	55 h-index	101 g-index

313	313	313	4426
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generating multi-GeV electron bunches using single stage laser wakefield acceleration in a 3D nonlinear regime. Physical Review Special Topics: Accelerators and Beams, 2007, 10, .	1.8	710
2	Proton Shock Acceleration in Laser-Plasma Interactions. Physical Review Letters, 2004, 92, 015002.	7.8	431
3	OSIRIS: A Three-Dimensional, Fully Relativistic Particle in Cell Code for Modeling Plasma Based Accelerators. Lecture Notes in Computer Science, 2002, , 342-351.	1.3	413
4	Bright spatially coherent synchrotron X-rays from a table-top source. Nature Physics, 2010, 6, 980-983.	16.7	392
5	Collisionless shocks in laser-produced plasma generate monoenergetic high-energy proton beams. Nature Physics, 2012, 8, 95-99.	16.7	358
6	Self-Guided Laser Wakefield Acceleration beyond 1ÂGeV Using Ionization-Induced Injection. Physical Review Letters, 2010, 105, 105003.	7.8	338
7	Interpenetrating Plasma Shells: Near-Equipartition Magnetic Field Generation and Nonthermal Particle Acceleration. Astrophysical Journal, 2003, 596, L121-L124.	4.5	333
8	Nuclear reaction rates and energy in stellar plasmas: The effect of highly damped modes. Physics of Plasmas, 2001, 8, 2454-2460.	1.9	305
9	Generation of neutral and high-density electronâ€“positron pair plasmas in the laboratory. Nature Communications, 2015, 6, 6747.	12.8	252
10	Near-GeV Acceleration of Electrons by a Nonlinear Plasma Wave Driven by a Self-Guided Laser Pulse. Physical Review Letters, 2009, 103, 035002.	7.8	239
11	Beam Loading in the Nonlinear Regime of Plasma-Based Acceleration. Physical Review Letters, 2008, 101, 145002.	7.8	228
12	On the role of the purely transverse Weibel instability in fast ignitor scenarios. Physics of Plasmas, 2002, 9, 2458-2461.	1.9	219
13	Laser-Driven Shock Acceleration of Monoenergetic Ion Beams. Physical Review Letters, 2012, 109, 215001.	7.8	184
14	One-to-one direct modeling of experiments and astrophysical scenarios: pushing the envelope on kinetic plasma simulations. Plasma Physics and Controlled Fusion, 2008, 50, 124034.	2.1	180
15	Near-GeV-Energy Laser-Wakefield Acceleration of Self-Injected Electrons in a Centimeter-Scale Plasma Channel. Physical Review Letters, 2004, 93, 185002.	7.8	168
16	Long-Time Evolution of Magnetic Fields in Relativistic Gamma-Ray Burst Shocks. Astrophysical Journal, 2005, 618, L75-L78.	4.5	165
17	Acceleration of electrons in the plasma wakefield of a proton bunch. Nature, 2018, 561, 363-367.	27.8	162
18	Simulations of efficient Raman amplification into the multipetawatt regime. Nature Physics, 2011, 7, 87-92.	16.7	154

#	Article	IF	Citations
19	Amplification and generation of ultra-intense twisted laser pulses via stimulated Raman scattering. Nature Communications, 2016, 7, 10371.	12.8	153
20	ION DYNAMICS AND ACCELERATION IN RELATIVISTIC SHOCKS. Astrophysical Journal, 2009, 695, L189-L193.	4.5	143
21	Exploring laser-wakefield-accelerator regimes for near-term lasers using particle-in-cell simulation in Lorentz-boosted frames. Nature Physics, 2010, 6, 311-316.	16.7	134
22	Measurements of the Critical Power for Self-Injection of Electrons in a Laser Wakefield Accelerator. Physical Review Letters, 2009, 103, 215006.	7.8	128
23	Weibel-Instability-Mediated Collisionless Shocks in the Laboratory with Ultraintense Lasers. Physical Review Letters, 2012, 108, 235004.	7.8	119
24	Laser absorption via quantum electrodynamics cascades in counter propagating laser pulses. Physics of Plasmas, 2016, 23, .	1.9	118
25	Three-dimensional Weibel instability in astrophysical scenarios. Physics of Plasmas, 2003, 10, 1979-1984.	1.9	115
26	Exploiting multi-scale parallelism for large scale numerical modelling of laser wakefield accelerators. Plasma Physics and Controlled Fusion, 2013, 55, 124011.	2.1	98
27	Beam loading by electrons in nonlinear plasma wakes. Physics of Plasmas, 2009, 16, .	1.9	96
28	Neutrino Driven Streaming Instabilities in a Dense Plasma. Physical Review Letters, 1999, 83, 2703-2706.	7.8	95
29	All-Optical Steering of Laser-Wakefield-Accelerated Electron Beams. Physical Review Letters, 2010, 105, 215001.	7.8	94
30	Seeded QED cascades in counterpropagating laser pulses. Physical Review E, 2017, 95, 023210.	2.1	94
31	Experimental Evidence of Photon Acceleration of Ultrashort Laser Pulses in Relativistic Ionization Fronts. Physical Review Letters, 1997, 78, 4773-4776.	7.8	93
32	Space-Charge Effects in the Current-Filamentation or Weibel Instability. Physical Review Letters, 2006, 96, 105002.	7.8	91
33	Prospect of Studying Nonperturbative QED with Beam-Beam Collisions. Physical Review Letters, 2019, 122, 190404.	7.8	89
34	Evidence of photon acceleration by laser wake fields. Physics of Plasmas, 2006, 13, 033108.	1.9	88
35	Ion acceleration from laser-driven electrostatic shocks. Physics of Plasmas, 2013, 20, .	1.9	85
36	Simulation of monoenergetic electron generation via laser wakefield accelerators for 5â€“25TW lasers. Physics of Plasmas, 2006, 13, 056708.	1.9	83

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37	Quantum radiation reaction in head-on laser-electron beam interaction. New Journal of Physics, 2016, 18, 073035.	2.9	82
38	Collisionless shock formation, spontaneous electromagnetic fluctuations, and streaming instabilities. Physics of Plasmas, 2013, 20, .	1.9	80
39	Global Simulation for Laser-Driven MeV Electrons in Fast Ignition. Physical Review Letters, 2004, 93, 185004.	7.8	79
40	Very High Mach-Number Electrostatic Shocks in Collisionless Plasmas. Physical Review Letters, 2006, 96, 045005.	7.8	79
41	Cluster Magnetic Fields from Large-Scale Structure and Galaxy Cluster Shocks. Astrophysical Journal, 2006, 642, L1-L4.	4.5	75
42	All-Optical Radiation Reaction at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:msup><mml:mrow><mml:mn>0</mml:mn></mml:mrow><mml:mrow><mm mathvariant="normal">W</mml:mi><mml:mo>/</mml:mo><mml:msup><mml:mrow><mml:mi>cm</mml:mi></mml:mrow><mml:mrow> Physical Review Letters, 2014, 113, 134801.	7.8	74
43	Magnetic Control of Particle Injection in Plasma Based Accelerators. Physical Review Letters, 2011, 106, 225001.	7.8	71
44	Stable multi-GeV electron accelerator driven by waveform-controlled PW laser pulses. Scientific Reports, 2017, 7, 10203.	3.3	69
45	Proton-driven plasma wakefield acceleration: a path to the future of high-energy particle physics. Plasma Physics and Controlled Fusion, 2014, 56, 084013.	2.1	68
46	Generation of ultra-intense single-cycle laser pulses by using photon deceleration. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 29-32.	7.1	67
47	High Orbital Angular Momentum Harmonic Generation. Physical Review Letters, 2016, 117, 265001.	7.8	66
48	Effect of the frequency chirp on laser wakefield acceleration. New Journal of Physics, 2012, 14, 023057.	2.9	64
49	EuPRAXIA Conceptual Design Report. European Physical Journal: Special Topics, 2020, 229, 3675-4284.	2.6	64
50	Characterization of transverse beam emittance of electrons from a laser-plasma wakefield accelerator in the bubble regime using betatron x-ray radiation. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	63
51	Ion acceleration from the shock front induced by hole boring in ultraintense laser-plasma interactions. Physical Review E, 2004, 70, 046414.	2.1	60
52	Horizon 2020 EuPRAXIA design study. Journal of Physics: Conference Series, 2017, 874, 012029.	0.4	60
53	LARGE-SCALE MAGNETIC FIELD GENERATION VIA THE KINETIC KELVIN-HELMHOLTZ INSTABILITY IN UNMAGNETIZED SCENARIOS. Astrophysical Journal Letters, 2012, 746, L14.	8.3	59
54	Production of Picosecond, Kilojoule, and Petawatt Laser Pulses via Raman Amplification of Nanosecond Pulses. Physical Review Letters, 2011, 107, 105002.	7.8	57

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55	Exploring the nature of collisionless shocks under laboratory conditions. Scientific Reports, 2014, 4, 3934.	3.3	57
56	dHybrid: A massively parallel code for hybrid simulations of space plasmas. Computer Physics Communications, 2007, 176, 419-425.	7.5	56
57	Dynamics and Control of Shock Shells in the Coulomb Explosion of Very Large Deuterium Clusters. Physical Review Letters, 2005, 94, 033401.	7.8	55
58	Particle merging algorithm for PIC codes. Computer Physics Communications, 2015, 191, 65-73.	7.5	54
59	Classical radiation reaction in particle-in-cell simulations. Computer Physics Communications, 2016, 204, 141-151.	7.5	54
60	Numerical instability due to relativistic plasma drift in EM-PIC simulations. Computer Physics Communications, 2013, 184, 2503-2514.	7.5	53
61	Laserâ€“plasma interactions for fast ignition. Nuclear Fusion, 2014, 54, 054002.	3.5	51
62	Regular and stochastic acceleration of photons. Physical Review E, 1994, 49, 3520-3523.	2.1	50
63	Collisionless Weibel shocks: Full formation mechanism and timing. Physics of Plasmas, 2014, 21, .	1.9	49
64	Implementation of a hybrid particle code with a PIC description in râ€“z and a gridless description in Ï• into OSIRIS. Journal of Computational Physics, 2015, 281, 1063-1077.	3.8	49
65	Experimental Observation of Plasma Wakefield Growth Driven by the Seeded Self-Modulation of a Proton Bunch. Physical Review Letters, 2019, 122, 054801.	7.8	49
66	Experimental Observation of Proton Bunch Modulation in a Plasma at Varying Plasma Densities. Physical Review Letters, 2019, 122, 054802.	7.8	49
67	Ion Motion in Self-Modulated Plasma Wakefield Accelerators. Physical Review Letters, 2012, 109, 145005.	7.8	47
68	Electronâ€“positron cascades in multiple-laser optical traps. Plasma Physics and Controlled Fusion, 2017, 59, 014040.	2.1	47
69	Intense laser-plasma interactions: New frontiers in high energy density physics. Physics of Plasmas, 2009, 16, .	1.9	45
70	Transverse self-modulation of ultra-relativistic lepton beams in the plasma wakefield accelerator. Physics of Plasmas, 2012, 19, 063105.	1.9	44
71	Direct observation of betatron oscillations in a laser-plasma electron accelerator. Europhysics Letters, 2008, 81, 64001.	2.0	43
72	Minimagnetospheres above the Lunar Surface and the Formation of Lunar Swirls. Physical Review Letters, 2012, 109, 081101.	7.8	43

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73	Mechanism of generating fast electrons by an intense laser at a steep overdense interface. Physical Review E, 2011, 84, 025401.	2.1	42
74	Magnetic-Field Generation and Amplification in an Expanding Plasma. Physical Review Letters, 2014, 112, 175001.	7.8	40
75	Magnetic turbulence in a table-top laser-plasma relevant to astrophysical scenarios. Nature Communications, 2017, 8, 15970.	12.8	40
76	Kinetic theory of photon acceleration: Time-dependent spectral evolution of ultrashort laser pulses. Physical Review E, 1998, 57, 3423-3431.	2.1	38
77	Kinetics of the Collisionless Expansion of Spherical Nanoplasmas. Physical Review Letters, 2006, 96, 175002.	7.8	38
78	Polarized beam conditioning in plasma based acceleration. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	38
79	Ponderomotive force of quasiparticles in a plasma. Physical Review E, 1999, 59, 2273-2280.	2.1	37
80	Collimated protons accelerated from an overdense gas jet irradiated by a 1â€‰Âµm wavelength high-intensity short-pulse laser. Scientific Reports, 2017, 7, 13505.	3.3	37
81	Onset of self-steepening of intense laser pulses in plasmas. New Journal of Physics, 2010, 12, 045025.	2.9	36
82	Spontaneous Generation of Self-Organized Solitary Wave Structures at Earthâ€™s Magnetopause. Physical Review Letters, 2007, 99, 205006.	7.8	35
83	Radiation post-processing in PIC codes. Proceedings of SPIE, 2009, , .	0.8	34
84	dc-Magnetic-Field Generation in Unmagnetized Shear Flows. Physical Review Letters, 2013, 111, 015005.	7.8	34
85	Electron-scale shear instabilities: magnetic field generation and particle acceleration in astrophysical jets. New Journal of Physics, 2014, 16, 035007.	2.9	34
86	Baryon loading and the Weibel instability in gamma-ray bursts. Monthly Notices of the Royal Astronomical Society, 2006, 372, 1851-1855.	4.4	33
87	A compact tunable polarized X-ray source based on laser-plasma helical undulators. Scientific Reports, 2016, 6, 29101.	3.3	33
88	Quasiparticle Approach to the Modulational Instability of Drift Waves Coupling to Zonal Flows. Physical Review Letters, 2005, 94, 165002.	7.8	32
89	Dynamics and control of the expansion of finite-size plasmas produced in ultraintense laser-matter interactions. Physics of Plasmas, 2007, 14, 056704.	1.9	31
90	The interaction of a flowing plasma with a dipole magnetic field: measurements and modelling of a diamagnetic cavity relevant to spacecraft protection. Plasma Physics and Controlled Fusion, 2008, 50, 124025.	2.1	31

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91	Numerical simulations of laser wakefield accelerators in optimal Lorentz frames. Computer Physics Communications, 2010, 181, 869-875.	7.5	31
92	GENERATION OF MAGNETIC FIELDS IN COSMOLOGICAL SHOCKS. Journal of the Korean Astronomical Society, 2004, 37, 533-541.	1.5	31
93	Equivalent charge of photons and neutrinos in a plasma. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 239, 373-377.	2.1	30
94	A global simulation for laser-driven MeV electrons in 50-Î¼m-diameter fast ignition targets. Physics of Plasmas, 2006, 13, 056308.	1.9	30
95	Statistical kinetic treatment of relativistic binary collisions. Physical Review E, 2009, 79, 025701.	2.1	30
96	Physical Mechanism of the Transverse Instability in Radiation Pressure Ion Acceleration. Physical Review Letters, 2016, 117, 234801.	7.8	30
97	Electron trapping and acceleration by the plasma wakefield of a self-modulating proton beam. Physics of Plasmas, 2014, 21, .	1.9	29
98	Persistence of magnetic field driven by relativistic electrons in a plasma. Nature Physics, 2015, 11, 409-413.	16.7	29
99	The generation of magnetic fields by the Biermann battery and the interplay with the Weibel instability. Physics of Plasmas, 2016, 23, .	1.9	29
100	Laser wakefield acceleration at reduced density in the self-guided regime. Physics of Plasmas, 2010, 17, 056709.	1.9	28
101	Elimination of the numerical Cerenkov instability for spectral EM-PIC codes. Computer Physics Communications, 2015, 192, 32-47.	7.5	27
102	Extremely intense laser-based electron acceleration in a plasma channel. Plasma Physics and Controlled Fusion, 2018, 60, 034002.	2.1	27
103	Collective neutrinoâ€“plasma interactions. Physics of Plasmas, 2000, 7, 2166-2172.	1.9	26
104	Photon kinetic theory of self-phase modulation. Optics Communications, 2001, 196, 285-291.	2.1	25
105	Laser pulse frequency up-shifts by relativistic ionization fronts. Europhysics Letters, 2004, 66, 371-377.	2.0	25
106	Controlled shock shells and intracluster fusion reactions in the explosion of large clusters. Physical Review A, 2006, 73, .	2.5	24
107	THE NONLINEAR SATURATION OF THE NON-RESONANT KINETICALLY DRIVEN STREAMING INSTABILITY. Astrophysical Journal Letters, 2010, 711, L127-L132.	8.3	24
108	Transverse electron-scale instability in relativistic shear flows. Physical Review E, 2015, 92, 021101.	2.1	24

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109	SHOCK FORMATION IN ELECTRONâ€“ION PLASMAS: MECHANISM AND TIMING. Astrophysical Journal Letters, 2015, 803, L29.	8.3	24
110	Bright <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow></mml:math> rays source and nonlinear Breit-Wheeler pairs in the collision of high density particle beams. Physical Review Accelerators and Beams, 2019, 22, .	1.6	24
111	A simulation study of fast ignition with ultrahigh intensity lasers. Physics of Plasmas, 2009, 16, .	1.9	23
112	Modeling of laser wakefield acceleration in Lorentz boosted frame using EM-PIC code with spectral solver. Journal of Computational Physics, 2014, 266, 124-138.	3.8	23
113	3D PIC SIMULATIONS OF COLLISIONLESS SHOCKS AT LUNAR MAGNETIC ANOMALIES AND THEIR ROLE IN FORMING LUNAR SWIRLS. Astrophysical Journal, 2016, 830, 146.	4.5	23
114	Acceleration of collimated 45â€‰MeV protons by collisionless shocks driven in low-density, large-scale gradient plasmas by a 1020â€‰W/cm2, 1â€‰Âµm laser. Scientific Reports, 2017, 7, 16463.	3.3	23
115	Mode coupling theory of flash ionization in a cavity. IEEE Transactions on Plasma Science, 1996, 24, 147-151.	1.3	22
116	Electron acceleration by wave turbulence in a magnetized plasma. Nature Physics, 2018, 14, 475-479.	16.7	22
117	Photon acceleration in superluminous and accelerated ionization fronts. IEEE Transactions on Plasma Science, 1996, 24, 316-322.	1.3	21
118	Hybrid simulations of mini-magnetospheres in the laboratory. Plasma Physics and Controlled Fusion, 2008, 50, 074017.	2.1	21
119	A proposed demonstration of an experiment of proton-driven plasma wakefield acceleration based on CERN SPS. Journal of Plasma Physics, 2012, 78, 347-353.	2.1	21
120	Ion motion in the wake driven by long particle bunches in plasmas. Physics of Plasmas, 2014, 21, 056705.	1.9	21
121	Demonstration of laser pulse amplification by stimulated Brillouin scattering. High Power Laser Science and Engineering, 2014, 2, .	4.6	21
122	Mitigation of numerical Cerenkov radiation and instability using a hybrid finite difference-FFT Maxwell solver and a local charge conserving current deposit. Computer Physics Communications, 2015, 197, 144-152.	7.5	21
123	New criteria for efficient Raman and Brillouin amplification of laser beams in plasma. Scientific Reports, 2020, 10, 19875.	3.3	21
124	Bright Gamma-Ray Flares Powered by Magnetic Reconnection in QED-strength Magnetic Fields. Astrophysical Journal, 2019, 870, 49.	4.5	19
125	Three-dimensional particle-in-cell simulations of the Weibel instability in electron-positron plasmas. IEEE Transactions on Plasma Science, 2002, 30, 28-29.	1.3	18
126	Physical Problems (Microphysics) in Relativistic Plasma Flows. AIP Conference Proceedings, 2006, , .	0.4	18

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127	White-Light Parametric Instabilities in Plasmas. Physical Review Letters, 2007, 98, 235001.	7.8	18
128	Electromagnetic Field Generation in the Downstream of Electrostatic Shocks Due to Electron Trapping. Physical Review Letters, 2014, 113, 105002.	7.8	18
129	Efficient modeling of laserâ€“plasma interactions in high energy density scenarios. Plasma Physics and Controlled Fusion, 2011, 53, 074004.	2.1	17
130	ACCELERATION IN PERPENDICULAR RELATIVISTIC SHOCKS FOR PLASMAS CONSISTING OF LEPTONS AND HADRONS. Astrophysical Journal, 2012, 755, 68.	4.5	17
131	Relativistic generalization of formation and ion-reflection conditions in electrostatic shocks. Physical Review E, 2013, 87, 043116.	2.1	17
132	Conditions for the onset of the current filamentation instability in the laboratory. Journal of Plasma Physics, 2018, 84, .	2.1	17
133	The physics of collective neutrino-plasma interactions. Plasma Physics and Controlled Fusion, 1999, 41, A699-A707.	2.1	16
134	Photon kinetics for laser-plasma interactions. IEEE Transactions on Plasma Science, 2000, 28, 1128-1134.	1.3	16
135	Plasma channels produced by a laser-triggered high-voltage discharge. Physical Review E, 2003, 68, 035402.	2.1	16
136	QuickPIC: a highly efficient fully parallelized PIC code for plasma-based acceleration. Journal of Physics: Conference Series, 2006, 46, 190-199.	0.4	16
137	Reflection of an electron beam by a photon mirror. Journal of Plasma Physics, 2007, 73, 627-634.	2.1	16
138	Enhancement in the electromagnetic beam-plasma instability due to ion streaming. Journal of Plasma Physics, 2012, 78, 181-187.	2.1	16
139	Magnetically assisted self-injection and radiation generation for plasma-based acceleration. Plasma Physics and Controlled Fusion, 2012, 54, 124044.	2.1	16
140	Interplay between the Weibel instability and the Biermann battery in realistic laser-solid interactions. Physical Review Research, 2020, 2, .	3.6	16
141	Propagation of relativistically intense laser pulses in nonuniform plasmas. Physical Review E, 1998, 58, 4890-4896.	2.1	15
142	Ergodic model for the expansion of spherical nanoplasmas. Physical Review E, 2007, 75, 066403.	2.1	15
143	Electron trapping and acceleration on a downward density ramp: a two-stage approach. New Journal of Physics, 2010, 12, 045027.	2.9	15
144	Mitigating the hosing instability in relativistic laser-plasma interactions. New Journal of Physics, 2016, 18, 053023.	2.9	15

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145	Coherent Emission from QED Cascades in Pulsar Polar Caps. Astrophysical Journal Letters, 2021, 919, L4.	8.3	15
146	Scaling laws for direct laser acceleration in a radiation-reaction dominated regime. New Journal of Physics, 2020, 22, 083058.	2.9	15
147	Photon acceleration of ultrashort laser pulses by relativistic ionization fronts. Physical Review E, 2002, 66, 056406.	2.1	14
148	Neutrino plasma coupling in dense astrophysical plasmas. Plasma Physics and Controlled Fusion, 2004, 46, B327-B334.	2.1	14
149	Photon acceleration and modulational instability during wakefield excitation using long laser pulses. Plasma Physics and Controlled Fusion, 2009, 51, 024008.	2.1	14
150	Modeling laser wakefield accelerator experiments with ultrafast particle-in-cell simulations in boosted frames. Physics of Plasmas, 2010, 17, 056705.	1.9	14
151	Optimizing laser-driven proton acceleration from overdense targets. Scientific Reports, 2016, 6, 29402.	3.3	14
152	All optical dual stage laser wakefield acceleration driven by two-color laser pulses. Scientific Reports, 2018, 8, 11772.	3.3	14
153	Kinetic Model of Large-amplitude Oscillations in Neutron Star Pair Cascades. Astrophysical Journal, 2021, 908, 149.	4.5	14
154	Exact analytical models of the streaming instability driven by intense neutrino beams. Journal of Cosmology and Astroparticle Physics, 2006, 2006, 011-011.	5.4	13
155	Computational studies and optimization of wakefield accelerators. Journal of Physics: Conference Series, 2008, 125, 012002.	0.4	13
156	Optimization of plasma amplifiers. Physical Review E, 2017, 95, 053211.	2.1	13
157	Compton scattering in particle-in-cell codes. Journal of Plasma Physics, 2020, 86, .	2.1	13
158	Transition between Instability and Seeded Self-Modulation of a Relativistic Particle Bunch in Plasma. Physical Review Letters, 2021, 126, 164802.	7.8	13
159	Anisotropic heating and magnetic field generation due to Raman scattering in laser-plasma interactions. Physical Review Research, 2020, 2, .	3.6	13
160	Scattering of Neutrinos and Gravitational Waves in Supernovae. Physica Scripta, 1998, T75, 61.	2.5	12
161	Neutrino Kinetics in Dense Astrophysical Plasmas. Astrophysical Journal, Supplement Series, 2000, 127, 481-484.	7.7	12
162	Neutrino effective charge in a plasma. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 548, 63-67.	4.1	12

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163	All-optical trapping and acceleration of heavy particles. New Journal of Physics, 2008, 10, 033028.	2.9	12
164	Applications of the wave kinetic approach: From laser wakefields to drift wave turbulence. Physics of Plasmas, 2009, 16, 055904.	1.9	12
165	PIC Codes in New Processors: A Full Relativistic PIC Code in CUDA-Enabled Hardware With Direct Visualization. IEEE Transactions on Plasma Science, 2011, 39, 675-685.	1.3	12
166	Study of near-GeV acceleration of electrons in a non-linear plasma wave driven by a self-guided laser pulse. Plasma Physics and Controlled Fusion, 2011, 53, 014008.	2.1	12
167	Influence of realistic parameters on state-of-the-art laser wakefield accelerator experiments. Plasma Physics and Controlled Fusion, 2012, 54, 055010.	2.1	12
168	The impact of kinetic effects on the properties of relativistic electronâ€“positron shocks. Plasma Physics and Controlled Fusion, 2012, 54, 125004.	2.1	12
169	Effect of collisions on amplification of laser beams by Brillouin scattering in plasmas. Physics of Plasmas, 2013, 20, 102114.	1.9	12
170	Enhanced stopping of macro-particles in particle-in-cell simulations. Physics of Plasmas, 2014, 21, .	1.9	12
171	Study on Coulomb explosions of ion mixtures. Journal of Plasma Physics, 2016, 82, .	2.1	12
172	Modelling radiation emission in the transition from the classical to the quantum regime. Plasma Physics and Controlled Fusion, 2016, 58, 014035.	2.1	12
173	Formation of collisionless shocks in magnetized plasma interaction with kinetic-scale obstacles. Physics of Plasmas, 2017, 24, .	1.9	12
174	Ion acceleration in electrostatic collisionless shock: on the optimal density profile for quasi-monoenergetic beams. Plasma Physics and Controlled Fusion, 2018, 60, 035010.	2.1	12
175	Stability of arbitrary electron velocity distribution functions to electromagnetic modes. Physics of Plasmas, 2007, 14, 062108.	1.9	11
176	Direct Acceleration of Ions With Variable-Frequency Lasers. IEEE Transactions on Plasma Science, 2008, 36, 1857-1865.	1.3	11
177	Fully Kinetic Large-scale Simulations of the Collisionless Magnetorotational Instability. Astrophysical Journal, 2018, 859, 149.	4.5	11
178	Wave kinetic treatment of forward four-wave stimulated scattering instabilities. Journal of Plasma Physics, 2005, 71, 899.	2.1	10
179	Self-modulation instability of ultra-relativistic particle bunches with finite rise times. Plasma Physics and Controlled Fusion, 2014, 56, 084014.	2.1	10
180	Weibel instability beyond bi-Maxwellian anisotropy. Physical Review E, 2021, 104, 035201.	2.1	10

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181	Comment on â€œPonderomotive force due to neutrinosâ€• Physical Review D, 1999, 60, .	4.7	9
182	Wigner-Moyal description of free variable mass Klein-Gordon fields. Journal of Mathematical Physics, 2005, 46, 102901.	1.1	9
183	Dynamics of intense laser propagation in underdense plasma: Polarization dependence. Physics of Plasmas, 2012, 19, .	1.9	9
184	General kinetic solution for the Biermann battery with an associated pressure anisotropy generation. Plasma Physics and Controlled Fusion, 2018, 60, 014048.	2.1	9
185	Are we ready to transfer optical light to gamma-rays?. Physics of Plasmas, 2019, 26, .	1.9	9
186	Interaction of ultra relativistic e â^' e + fireball beam with plasma. New Journal of Physics, 2020, 22, 013030.	2.9	9
187	Quantum Electrodynamics vacuum polarization solver. New Journal of Physics, 2021, 23, 095005.	2.9	9
188	Laser-driven, ion-scale magnetospheres in laboratory plasmas. I. Experimental platform and first results. Physics of Plasmas, 2022, 29, .	1.9	9
189	Two-dimensional collision of probe photons with relativistic ionization fronts. Physical Review E, 2002, 65, 036404.	2.1	8
190	Expansion of nanoplasmas and laser-driven nuclear fusion in single exploding clusters. Plasma Physics and Controlled Fusion, 2008, 50, 124049.	2.1	8
191	Simulating relativistic beam and plasma systems using an optimal boosted frame. Journal of Physics: Conference Series, 2009, 180, 012006.	0.4	8
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