

Lin Yin

List of Publications by Year in descending order

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117
papers

5,398
citations

76326

40
h-index

82547

72
g-index

125
all docs

125
docs citations

125
times ranked

2748
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of electron physics in the development of turbulent magnetic reconnection in collisionless plasmas. <i>Nature Physics</i> , 2011, 7, 539-542.	16.7	474
2	Ultrahigh performance three-dimensional electromagnetic relativistic kinetic plasma simulation. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	379
3	Monoenergetic and GeV ion acceleration from the laser breakout afterburner using ultrathin targets. <i>Physics of Plasmas</i> , 2007, 14, 056706.	1.9	299
4	GeV laser ion acceleration from ultrathin targets: The laser break-out afterburner. <i>Laser and Particle Beams</i> , 2006, 24, 291-298.	1.0	283
5	Transition from collisional to kinetic regimes in large-scale reconnection layers. <i>Physical Review Letters</i> , 2009, 103, 065004.	7.8	210
6	Enhanced Laser-Driven Ion Acceleration in the Relativistic Transparency Regime. <i>Physical Review Letters</i> , 2009, 103, 045002.	7.8	208
7	Three-Dimensional Dynamics of Breakout Afterburner Ion Acceleration Using High-Contrast Short-Pulse Laser and Nanoscale Targets. <i>Physical Review Letters</i> , 2011, 107, 045003.	7.8	155
8	Dynamics of relativistic transparency and optical shuttering in expanding overdense plasmas. <i>Nature Physics</i> , 2012, 8, 763-769.	16.7	155
9	Advances in petascale kinetic plasma simulation with VPIC and Roadrunner. <i>Journal of Physics: Conference Series</i> , 2009, 180, 012055.	0.4	144
10	Fast ignition with laser-driven proton and ion beams. <i>Nuclear Fusion</i> , 2014, 54, 054006.	3.5	119
11	Progress and prospects of ion-driven fast ignition. <i>Nuclear Fusion</i> , 2009, 49, 065004.	3.5	117
12	Forced magnetic reconnection. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	96
13	Observation of a Transition from Fluid to Kinetic Nonlinearities for Langmuir Waves Driven by Stimulated Raman Backscatter. <i>Physical Review Letters</i> , 2005, 94, 175003.	7.8	94
14	Relativistic Buneman instability in the laser breakout afterburner. <i>Physics of Plasmas</i> , 2007, 14, .	1.9	88
15	A review of laser-plasma interaction physics of indirect-drive fusion. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 103001.	2.1	86
16	Laser-driven ion accelerators: Spectral control, monoenergetic ions and new acceleration mechanisms. <i>Laser and Particle Beams</i> , 2007, 25, 3-8.	1.0	80
17	Saturation of Backward Stimulated Scattering of a Laser Beam in the Kinetic Regime. <i>Physical Review Letters</i> , 2007, 99, 265004.	7.8	75
18	Laser-driven ion acceleration from relativistically transparent nanotargets. <i>New Journal of Physics</i> , 2013, 15, 085015.	2.9	75

#	ARTICLE	IF	CITATIONS
19	Influence of Coulomb collisions on the structure of reconnection layers. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	68
20	Monoenergetic Ion Beam Generation by Driving Ion Solitary Waves with Circularly Polarized Laser Light. <i>Physical Review Letters</i> , 2011, 107, 115002.	7.8	67
21	Theory of Laser Acceleration of Light-Ion Beams from Interaction of Ultrahigh-Intensity Lasers with Layered Targets. <i>Physical Review Letters</i> , 2006, 97, 115002.	7.8	66
22	Efficient carbon ion beam generation from laser-driven volume acceleration. <i>New Journal of Physics</i> , 2013, 15, 023007.	2.9	66
23	Laser-driven 1â€‰GeV carbon ions from preheated diamond targets in the break-out afterburner regime. <i>Physics of Plasmas</i> , 2013, 20, 083103.	1.9	65
24	Saturation of backward stimulated scattering of laser in kinetic regime: Wavefront bowing, trapped particle modulational instability, and trapped particle self-focusing of plasma waves. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	64
25	Different $k \gg D$ regimes for nonlinear effects on Langmuir waves. <i>Physics of Plasmas</i> , 2006, 13, 055906.	1.9	61
26	Electromagnetic alpha/proton instabilities in the solar wind. <i>Geophysical Research Letters</i> , 2000, 27, 1355-1358.	4.0	59
27	Experimental demonstration of particle energy, conversion efficiency and spectral shape required for ion-based fast ignition. <i>Nuclear Fusion</i> , 2011, 51, 083011.	3.5	57
28	Particle energization in 3D magnetic reconnection of relativistic pair plasmas. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	56
29	Control of Stimulated Raman Scattering in the Strongly Nonlinear and Kinetic Regime Using Spike Trains of Uneven Duration and Delay. <i>Physical Review Letters</i> , 2014, 113, 045002.	7.8	53
30	Consequences of proton and alpha anisotropies in the solar wind: Hybrid simulations. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	51
31	Break-out afterburner ion acceleration in the longer laser pulse length regime. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	51
32	Three-Dimensional Dynamics of Collisionless Magnetic Reconnection in Large-Scale Pair Plasmas. <i>Physical Review Letters</i> , 2008, 101, 125001.	7.8	50
33	Onset and saturation of backward stimulated Raman scattering of laser in trapping regime in three spatial dimensions. <i>Physics of Plasmas</i> , 2009, 16, 113101.	1.9	50
34	Trapping induced nonlinear behavior of backward stimulated Raman scattering in multi-speckled laser beams. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	50
35	Alpha/proton magnetosonic instability in the solar wind. <i>Journal of Geophysical Research</i> , 2000, 105, 20989-20996.	3.3	46
36	Use of external magnetic fields in hohlraum plasmas to improve laser-coupling. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	45

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37	Laser-plasmas in the relativistic-transparency regime: Science and applications. <i>Physics of Plasmas</i> , 2017, 24, 056702.	1.9	44
38	Beam profiles of proton and carbon ions in the relativistic transparency regime. <i>New Journal of Physics</i> , 2013, 15, 123035.	2.9	43
39	Nonlinear backward stimulated Raman scattering from electron beam acoustic modes in the kinetic regime. <i>Physics of Plasmas</i> , 2006, 13, 072701.	1.9	42
40	Theory of laser ion acceleration from a foil target of nanometer thickness. <i>Applied Physics B: Lasers and Optics</i> , 2010, 98, 711-721.	2.2	42
41	Self-organized coherent bursts of stimulated Raman scattering and speckle interaction in multi-speckled laser beams. <i>Physics of Plasmas</i> , 2013, 20, 012702.	1.9	42
42	Hybrid and Hall-MHD simulations of collisionless reconnection: Dynamics of the electron pressure tensor. <i>Journal of Geophysical Research</i> , 2001, 106, 10761-10775.	3.3	41
43	Langmuir wave filamentation instability. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	41
44	Nonlinear development of stimulated Raman scattering from electrostatic modes excited by self-consistent non-Maxwellian velocity distributions. <i>Physical Review E</i> , 2006, 73, 025401.	2.1	40
45	0.374 Pflop/s trillion-particle kinetic modeling of laser plasma interaction on roadrunner. , 2008, , .		39
46	Multi-beam effects on backscatter and its saturation in experiments with conditions relevant to ignition. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	38
47	Nonlinear Spectral Signatures and Spatiotemporal Behavior of Stimulated Raman Scattering from Single Laser Speckles. <i>Physical Review Letters</i> , 2005, 95, 245003.	7.8	37
48	A novel high resolution ion wide angle spectrometer. <i>Review of Scientific Instruments</i> , 2011, 82, 043301.	1.3	34
49	Plasma kinetic effects on interfacial mix. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	32
50	Effects of dimensionality on kinetic simulations of laser-ion acceleration in the transparency regime. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	32
51	Investigation of stimulated Raman scattering using a short-pulse diffraction limited laser beam near the instability threshold. <i>Laser and Particle Beams</i> , 2009, 27, 185-190.	1.0	31
52	Self-Organized Bursts of Coherent Stimulated Raman Scattering and Hot Electron Transport in Speckled Laser Plasma Media. <i>Physical Review Letters</i> , 2012, 108, 245004.	7.8	30
53	Plasma pressure tensor effects on reconnection: Hybrid and Hall-magnetohydrodynamics simulations. <i>Physics of Plasmas</i> , 2003, 10, 1595-1604.	1.9	25
54	Alfvén-cyclotron scattering of solar wind ions: Hybrid simulations. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	25

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55	Driven magnetic reconnection near the Dreicer limit. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	25
56	Mono-energetic ion beam acceleration in solitary waves during relativistic transparency using high-contrast circularly polarized short-pulse laser and nanoscale targets. <i>Physics of Plasmas</i> , 2011, 18, 053103.	1.9	24
57	Observation of amplification of light by Langmuir waves and its saturation on the electron kinetic timescale. <i>Journal of Plasma Physics</i> , 2011, 77, 521-528.	2.1	24
58	Saturation of cross-beam energy transfer for multispeckled laser beams involving both ion and electron dynamics. <i>Physics of Plasmas</i> , 2019, 26, 082708.	1.9	24
59	Multi-dimensional dynamics of stimulated Brillouin scattering in a laser speckle: Ion acoustic wave bowing, breakup, and laser-seeded two-ion-wave decay. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	23
60	Progress on ion based fast ignition. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022051.	0.4	21
61	Stimulated scattering in laser driven fusion and high energy density physics experiments. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	21
62	A semi-implicit, energy- and charge-conserving particle-in-cell algorithm for the relativistic Vlasov-Maxwell equations. <i>Journal of Computational Physics</i> , 2020, 407, 109228.	3.8	21
63	Cross-Beam Energy Transfer Saturation by Ion Heating. <i>Physical Review Letters</i> , 2021, 126, 075002.	7.8	19
64	Plasma kinetic effects on interfacial mix and burn rates in multispatial dimensions. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	18
65	Kinetic Alfvén waves and electron physics. I. Generation from ion-ion streaming. <i>Physics of Plasmas</i> , 2007, 14, 062104.	1.9	17
66	Secondary Island Formation in Collisional and Collisionless Kinetic Simulations of Magnetic Reconnection. <i>AIP Conference Proceedings</i> , 2011, , .	0.4	17
67	A double-foil target for improving beam quality in laser ion acceleration with thin foils. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	17
68	Scaling of ion energies in the relativistic-induced transparency regime. <i>Laser and Particle Beams</i> , 2015, 33, 695-703.	1.0	15
69	Plasma waves in the Earth's electron foreshock: 1. Time-of-flight electron distributions in a generalized Lorentzian plasma and dispersion solutions. <i>Journal of Geophysical Research</i> , 1998, 103, 29595-29617.	3.3	14
70	The relationship between $\langle j \rangle$ and $\langle B \rangle$ and $\langle \hat{\tau} \rangle$ and $\langle P \rangle$ in the magnetotail plasma sheet: Cluster observations. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	14
71	Diffusion-driven fluid dynamics in ideal gases and plasmas. <i>Physics of Plasmas</i> , 2018, 25, 062102.	1.9	12
72	Simulations of current sheet thinning and reconnection. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 39-1-SMP 39-11.	3.3	11

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73	Particle-in-cell studies of laser-driven hot spots and a statistical model for mesoscopic properties of Raman backscatter. <i>European Physical Journal Special Topics</i> , 2006, 133, 253-257.	0.2	11
74	Solar wind ion scattering by Alfvén-cyclotron fluctuations: ion temperature anisotropies versus relative alpha particle densities. <i>New Journal of Physics</i> , 2006, 8, 17-17.	2.9	11
75	Studies in capsule design for mid-Z ion-driven fast ignition. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022029.	0.4	11
76	Self-similar solutions for multi-species plasma mixing by gradient driven transport. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 054010.	2.1	11
77	A detailed examination of laser-ion acceleration mechanisms in the relativistic transparency regime using tracers. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	11
78	Role of electron physics in slow mode shocks. <i>Journal of Geophysical Research</i> , 2001, 106, 25031-25039.	3.3	10
79	Investigation of laser plasma instabilities using picosecond laser pulses. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022042.	0.4	10
80	Experiments and simulations of isochorically heated warm dense carbon foam at the Texas Petawatt Laser. <i>Matter and Radiation at Extremes</i> , 2021, 6, .	3.9	10
81	Results from single-shock Marble experiments studying thermonuclear burn in the presence of heterogeneous mix on the National Ignition Facility. <i>High Energy Density Physics</i> , 2021, 38, 100929.	1.5	10
82	Cross-beam energy transfer in direct-drive ICF. II. Theory and simulation of mitigation through increased laser bandwidth. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	10
83	Improving beam spectral and spatial quality by double-foil target in laser ion acceleration. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2011, 14, .	1.8	9
84	Particle Hall-MHD simulation of collisionless reconnection: Ion gyro-radius correction. <i>Geophysical Research Letters</i> , 2001, 28, 2173-2176.	4.0	8
85	Kinetic Alfvén waves and electron physics. II. Oblique slow shocks. <i>Physics of Plasmas</i> , 2007, 14, 062105.	1.9	8
86	A maximum likelihood method for linking particle-in-cell and Monte-Carlo transport simulations. <i>Computer Physics Communications</i> , 2004, 164, 311-317.	7.5	7
87	Influence of binary Coulomb collisions on nonlinear stimulated Raman backscatter in the kinetic regime. <i>Physics of Plasmas</i> , 2011, 18, 032707.	1.9	7
88	Cross-beam energy transfer saturation by ion trapping-induced detuning. <i>Physics of Plasmas</i> , 2021, 28, 082705.	1.9	7
89	Plasma transport simulations of Rayleigh-Taylor instability in near-ICF deceleration regimes. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	7
90	Experimental quantification of the impact of heterogeneous mix on thermonuclear burn. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	7

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91	Cross-beam energy transfer in direct-drive ICF. I. Nonlinear and kinetic effects. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	7
92	Generation of electrostatic waves by discontinuous electron distributions. <i>Journal of Geophysical Research</i> , 1999, 104, 12415-12429.	3.3	6
93	Dissipation in oblique slow shocks. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	6
94	Simulation of the Cygnus Rod-Pinch Diode Using the Radiographic Chain Model. <i>IEEE Transactions on Plasma Science</i> , 2009, 37, 530-537.	1.3	6
95	Harnessing the relativistic Buneman instability for laser-ion acceleration in the transparency regime. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	6
96	Electron quasi-viscous effects in collisionless slow-mode shocks. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	5
97	Theory and modeling of ion acceleration from the interaction of ultra-intense lasers with solid density targets. <i>European Physical Journal Special Topics</i> , 2006, 133, 467-471.	0.2	5
98	Ultraintense laser interaction with nanoscale targets: a simple model for layer expansion and ion acceleration. <i>Journal of Physics: Conference Series</i> , 2010, 244, 042022.	0.4	4
99	On the analysis of inhomogeneous magnetic field spectrometer for laser-driven ion acceleration. <i>Review of Scientific Instruments</i> , 2015, 86, 033303.	1.3	4
100	Improved yield and control of spectra from high-intensity laser-generated neutron beams. <i>Laser and Particle Beams</i> , 2018, 36, 15-21.	1.0	4
101	Forward and backward stimulated Raman scattering in multi-speckled beams: Density dependence and effects on cross-beam energy transfer. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	4
102	Cross-beam energy transfer saturation: ion heating and pump depletion. <i>Plasma Physics and Controlled Fusion</i> , 2022, 64, 034003.	2.1	4
103	Effects of ion composition on backward stimulated Raman and Brillouin scattering in a laser-driven hot spot. <i>European Physical Journal Special Topics</i> , 2006, 133, 335-337.	0.2	3
104	Single and double shell ignition targets for the national ignition facility at 527â€nm. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	3
105	Kinetic simulations of stimulated Raman and Brillouin scattering of trident short-pulse laser in a single-hot-spot. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022033.	0.4	2
106	Creating QED photon jets with present-day lasers. <i>Physical Review Research</i> , 2021, 3, .	3.6	2
107	Evidence for trapping-induced nonlinear frequency shifts in Langmuir waves driven via stimulated Raman scattering. <i>Physics of Plasmas</i> , 2021, 28, 092103.	1.9	2
108	New Insights Into Collisionless Magnetic Reconnection Enabled by Ultra-High Performance Three-Dimensional Kinetic Simulations. <i>IEEE Transactions on Plasma Science</i> , 2008, 36, 1110-1111.	1.3	1

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109	Laser-ion acceleration using mixed compositions: Tailoring the target for each species. Physics of Plasmas, 2019, 26, .	1.9	1
110	Streaked optical pyrometer for proton-driven isochoric heating experiments of solid and foam targets. AIP Advances, 2020, 10, 045220.	1.3	1
111	Three-dimensional simulation of KeV photon laser operation using GeV ultra short laser-generated electron bunches. , 2008, , .		0
112	Recent progress on ion-driven fast ignition. , 2009, , .		0
113	INERTIAL CONFINEMENT FUSION RESEARCH AT LOS ALAMOS NATIONAL LABORATORY. , 2009, , .		0
114	Generation of 0.5GEV C6+ ions from irradiation of ultra-thin foils with high contrast, high intensity laser pulses. , 2009, , .		0
115	A Simple Model of Hohlraum Power Balance and Mitigation of SRS. Journal of Physics: Conference Series, 2016, 688, 012002.	0.4	0
116	Challenges and Progress of Laser-driven Ion Acceleration beyond 100 MeV/amu. , 2013, , .		0
117	Fast Ignition With Laser-Driven Ion Beams: Progress On Ignitor Beam Development Based On A New Relativistic Laser-Plasma Regime. , 2013, , .		0