Su-Ming Weng

List of Publications by Year
in descending order

92 papers	1,273 citations	331670 21 h-index	454955 30 g-index
93 all docs	93 docs citations	93 times ranked	1065 citing authors

#	Article	IF	Citations
1	EuPRAXIA Conceptual Design Report. European Physical Journal: Special Topics, 2020, 229, 3675-4284.	2.6	64
2	Multistage Coupling of Laser-Wakefield Accelerators with Curved Plasma Channels. Physical Review Letters, 2018, 120, 154801.	7.8	63
3	Ultra-intense laser pulse propagation in plasmas: from classic hole-boring to incomplete hole-boring with relativistic transparency. New Journal of Physics, 2012, 14, 063026.	2.9	54
4	Extremely brilliant GeV Î³-rays from a two-stage laser-plasma accelerator. Science Advances, 2020, 6, eaaz7240.	10.3	53
5	Bright attosecond Î³-ray pulses from nonlinear Compton scattering with laser-illuminated compound targets. Applied Physics Letters, 2018, 112, .	3.3	44
6	Acceleration and evolution of a hollow electron beam in wakefields driven by a Laguerre-Gaussian laser pulse. Physics of Plasmas, 2016, 23, .	1.9	42
7	Extreme case of Faraday effect: magnetic splitting of ultrashort laser pulses in plasmas. Optica, 2017, 4, 1086.	9.3	42
8	Ion acceleration by colliding electrostatic shock waves in laser-solid interaction. Physics of Plasmas, 2007, 14, 113106.	1.9	36
9	Generation of GeV positron and Î³-photon beams with controllable angular momentum by intense lasers. New Journal of Physics, 2018, 20, 083013.	2.9	36
10	Acceleration dynamics of ions in shocks and solitary waves driven by intense laser pulses. Physical Review E, 2007, 76, 035402.	2.1	33
11	A compact tunable polarized X-ray source based on laser-plasma helical undulators. Scientific Reports, 2016, 6, 29101.	3.3	33
12	Optimization of hole-boring radiation pressure acceleration of ion beams for fusion ignition. Matter and Radiation at Extremes, 2018, 3, 28-39.	3.9	30
13	Relativistic critical density increase and relaxation and high-power pulse propagation. Physics of Plasmas, 2012, 19, .	1.9	29
14	Plasma optical modulators for intense lasers. Nature Communications, 2016, 7, 11893.	12.8	29
15	Effective suppression of parametric instabilities with decoupled broadband lasers in plasma. Physics of Plasmas, 2017, 24, .	1.9	29
16	Dense blocks of energetic ions driven by multi-petawatt lasers. Scientific Reports, 2016, 6, 22150.	3.3	27
17	Inverse bremsstrahlung absorption with nonlinear effects of high laser intensity and non-Maxwellian distribution. Physical Review E, 2009, 80, 056406.	2.1	26
18	Mitigating parametric instabilities in plasmas by sunlight-like lasers. Matter and Radiation at Extremes, 2021, 6, .	3.9	26

#	Article	IF	Citations
19	Stimulated Raman scattering excited by incoherent light in plasma. Matter and Radiation at Extremes, 2017, 2, 190-196.	3.9	25
20	Acceleration of on-axis and ring-shaped electron beams in wakefields driven by Laguerre-Gaussian pulses. Journal of Applied Physics, 2016, 119, .	2.5	23
21	Quasi-monoenergetic ion generation by hole-boring radiation pressure acceleration in inhomogeneous plasmas using tailored laser pulses. Physics of Plasmas, 2014, 21, 012705.	1.9	22
22	Absorption of ultrashort intense lasers in laserâ€“solid interactions. Chinese Physics B, 2015, 24, 015201.	1.4	22
23	Analysis of the Brunel model and resulting hot electron spectra. Physics of Plasmas, 2012, 19, .	1.9	20
24	Collimated GeV attosecond electronâ€“positron bunches from a plasma channel driven by 10 PW lasers. Matter and Radiation at Extremes, 2019, 4, .	3.9	20
25	Effects of large laser bandwidth on stimulated Raman scattering instability in underdense plasma. Physics of Plasmas, 2015, 22, .	1.9	19
26	Single-Cycle Terawatt Twisted-Light Pulses at Midinfrared Wavelengths above 10Â Âµ m. Physical Review Applied, 2019, 12, .	3.8	18
27	Efficient generation of relativistic near-single-cycle mid-infrared pulses in plasmas. Light: Science and Applications, 2020, 9, 46.	16.6	18
28	Inverse bremsstrahlung absorption and the evolution of electron distributions accounting for electron-electron collisions. Physics of Plasmas, 2006, 13, 113302.	1.9	16
29	Control of focusing fields for positron acceleration in nonlinear plasma wakes using multiple laser modes. Physics of Plasmas, 2014, 21, 120702.	1.9	16
30	Effects of relativistic electron temperature on parametric instabilities for intense laser propagation in underdense plasma. Physics of Plasmas, 2014, 21, 112114.	1.9	16
31	Suppression of parametric instabilities in inhomogeneous plasma with multi-frequency light. Plasma Physics and Controlled Fusion, 2019, 61, 115008.	2.1	16
32	Plasma Currents and Electron Distribution Functions under a dc Electric Field of Arbitrary Strength. Physical Review Letters, 2008, 100, 185001.	7.8	14
33	Ionization injection in a laser wakefield accelerator subject to a transverse magnetic field. New Journal of Physics, 2018, 20, 063031.	2.9	14
34	Collisionless electrostatic shock formation and ion acceleration in intense laser interactions with near critical density plasmas. Physics of Plasmas, 2016, 23, .	1.9	12
35	Formation and evolution of a pair of collisionless shocks in counter-streaming flows. Scientific Reports, 2017, 7, 42915.	3.3	12
36	Target transverse size and laser polarization effects on pair production during ultra-relativistic-intense laser interaction with solid targets. Physics of Plasmas, 2017, 24, .	1.9	11

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37	Sub-femtosecond electron bunches in laser wakefield acceleration via injection suppression with a magnetic field. Plasma Physics and Controlled Fusion, 2019, 61, 085015.	2.1	11
38	Absolute instability modes due to rescattering of stimulated Raman scattering in a large nonuniform plasma. High Power Laser Science and Engineering, 2019, 7, .	4.6	11
39	Generation of 100-MeV Attosecond Electron Bunches with Terawatt Few-Cycle Laser Pulses. Physical Review Applied, 2021, 15, .	3.8	11
40	Efficient injection of radiation-pressure-accelerated sub-relativistic protons into laser wakefield acceleration based on 10 PW lasers. Physics of Plasmas, 2018, 25, .	1.9	10
41	Growth, saturation, and collapse of laser-driven plasma density gratings. Physics of Plasmas, 2020, 27, .	1.9	10
42	Simultaneous polarization transformation and amplification of multi-petawatt laser pulses in magnetized plasmas. Optics Express, 2019, 27, 19319.	3.4	10
43	Dynamics of boundary layer electrons around a laser wakefield bubble. Physics of Plasmas, 2016, 23, .	1.9	9
44	Directional enhancement of selected high-order-harmonics from intense laser irradiated blazed grating targets. Optics Express, 2017, 25, 23567.	3.4	9
45	Laser pulse compression towards collapse and beyond in plasma. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 055403.	1.5	9
46	Mitigation of multibeam stimulated Raman scattering with polychromatic light. Plasma Physics and Controlled Fusion, 2021, 63, 055006.	2.1	9
47	Polarized proton acceleration in ultraintense laser interaction with near-critical-density plasmas. Physical Review E, 2021, 104, 015216.	2.1	9
48	Generation of single-cycle relativistic infrared pulses at wavelengths above 20 Âµm from density-tailored plasmas. Matter and Radiation at Extremes, 2022, 7, .	3.9	9
49	Betatron radiation polarization control by using an off-axis ionization injection in a laser wakefield acceleration. Optics Express, 2020, 28, 29927.	3.4	8
50	Trapping and acceleration of spin-polarized positrons from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î³</mml:mi></mml:math> photon splitting in wakefields. Physical Review Research, 2022, 4, .	3.6	8
51	Nonlocal heat transport in laser-produced aluminum plasmas. Physics of Plasmas, 2010, 17, .	1.9	7
52	Generation of quasi-monoenergetic carbon ions accelerated parallel to the plane of a sandwich target. Physics of Plasmas, 2014, 21, .	1.9	7
53	Reducing ion energy spread in hole-boring radiation pressure acceleration by using two-ion-species targets. Laser and Particle Beams, 2015, 33, 103-107.	1.0	7
54	An angular-resolved multi-channel Thomson parabola spectrometer for laser-driven ion measurement. Review of Scientific Instruments, 2018, 89, 093302.	1.3	7

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55	Spatiotemporal distributions of pair production and cascade in solid targets irradiated by ultra-relativistic lasers with different polarizations. Plasma Physics and Controlled Fusion, 2018, 60, 065003.	2.1	6
56	High-quality high-order harmonic generation through preplasma truncation. Physical Review E, 2019, 100, 053207.	2.1	6
57	Mapping electromagnetic fields structure in plasma using a spin polarized electron beam. Physics of Plasmas, 2019, 26, .	1.9	6
58	Trapping of electromagnetic radiation in self-generated and preformed cavities. Laser and Particle Beams, 2013, 31, 589-595.	1.0	5
59	QED effects induced harmonics generation in extreme intense laser foil interaction. Plasma Physics and Controlled Fusion, 2018, 60, 044011.	2.1	5
60	Stimulated Raman scattering in a non-eigenmode regime. High Power Laser Science and Engineering, 2020, 8, .	4.6	5
61	Filamentation control and collimation of laser accelerated MeV protons. Plasma Physics and Controlled Fusion, 2015, 57, 125013.	2.1	4
62	Acceleration and radiation of externally injected electrons in laser plasma wakefield driven by a Laguerreâ€“Gaussian pulse. Chinese Physics B, 2017, 26, 115204.	1.4	4
63	Ion beam bunching via phase rotation in cascading laser-driven ion acceleration. Physics of Plasmas, 2018, 25, 083116.	1.9	4
64	Dynamics of moving electron vortices and magnetic ring in laser plasma interaction. Physics of Plasmas, 2021, 28, 042303.	1.9	4
65	Plasma modulator for high-power intense lasers. Optics Express, 2020, 28, 15794.	3.4	4
66	Control of laser light by a plasma immersed in a tunable strong magnetic field. Optics Express, 2019, 27, 23529.	3.4	4
67	Ion Acoustic Shock Wave Formation and Ion Acceleration in the Interactions of Pair Jets with Electronâ€“ion Plasmas. Astrophysical Journal, 2022, 931, 36.	4.5	4
68	Plasma currents and inverse bremsstrahlung absorption under strong dc/ac electric fields. Journal of Physics: Conference Series, 2010, 244, 022072.	0.4	3
69	Stable plateau formation and Brillouin suppression in laser plasma. Physics of Plasmas, 2010, 17, 102707.	1.9	3
70	Cascaded acceleration of proton beams in ultrashort laser-irradiated microtubes. Physics of Plasmas, 2017, 24, .	1.9	3
71	Magnetic field annihilation and reconnection driven by femtosecond lasers in inhomogeneous plasma. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1.	5.1	3
72	Inhibition of stimulated Raman scattering due to the excitation of stimulated Brillouin scattering. Physics of Plasmas, 2017, 24, 092116.	1.9	3

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73	Simulations of laser plasma instabilities using a particle-mesh method. Plasma Physics and Controlled Fusion, 2021, 63, 095005.	2.1	3
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75	Nonlocal thermal transport in magnetized plasma along different directions. Matter and Radiation at Extremes, 2022, 7, .	3.9	3
76	Inverse bremsstrahlung absorption with full electron-electron collisions operator. Journal of Physics: Conference Series, 2008, 112, 022039.	0.4	2
77	From ablation to radiation pressure in intense laserâ€“matter interaction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 653, 168-171.	1.6	2
78	Vlasov-Fokker-Planck Simulations for High-Power Laser-Plasma Interactions. Communications in Computational Physics, 2012, 11, 1236-1260.	1.7	2
79	Correlation between macroscopic plasma dynamics and electron beam parameters in a laser-plasma accelerator. Plasma Physics and Controlled Fusion, 2018, 60, 085020.	2.1	2
80	Eupraxia, A Step Toward A Plasma-Wakefield Based Accelerator With High Beam Quality. Journal of Physics: Conference Series, 2019, 1350, 012068.	0.4	2
81	Theoretical investigation on novel particle beams and radiation sources in relativistic laser-solid interactions. Journal of Physics: Conference Series, 2008, 112, 042030.	0.4	1
82	Monoenergetic collimated nano-Coulomb electron beams driven by crossed laser beams. Applied Physics Letters, 2013, 103, 024105.	3.3	1
83	Control of transverse motion and x-ray emission of electrons accelerated in laser-driven wakefields by tuning laser spatial chirp. Plasma Physics and Controlled Fusion, 2020, 62, 024002.	2.1	1
84	Dense tunable attosecond electron bunch from laser interaction with magnetized plasma. Plasma Physics and Controlled Fusion, 2020, 62, 055008.	2.1	1
85	Relativistic-induced opacity of electronâ€“positron plasmas. Plasma Physics and Controlled Fusion, 2021, 63, 045010.	2.1	1
86	Nonlinear evolution of stimulated scattering near 1/4 critical density. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 195202.	0.5	1
87	Effects of laser and plasma parameters on shock wave generation and acceleration of protons. Journal of Physics: Conference Series, 2008, 112, 042046.	0.4	0
88	Intense laser-driven electrostatic shocks and its acceleration of ions in overdense plasmas. Journal of Physics: Conference Series, 2008, 112, 042032.	0.4	0
89	Trapping of intense light in hollow shell. Physics of Plasmas, 2015, 22, 093110.	1.9	0
90	Large-Fluence Laser-Driven Ion Beam for Inertial Fusion Ignition. , 2017, , 775-782.		0

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91	Radiation reaction induced harmonics generation in ultra-relativistic intense laser interaction with plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 055001.	2.1	0
92	Laser plasma wakefield based high quality electron acceleration and radiation source. , 2016, , .		0