

Su-Ming Weng

List of Publications by Year in descending order

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Version: 2024-02-01

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	Generation of single-cycle relativistic infrared pulses at wavelengths above 20 μm from density-tailored plasmas. <i>Matter and Radiation at Extremes</i> , 2022, 7, .	3.9	9
2	Trapping and acceleration of spin-polarized positrons from γ photon splitting in wakefields. <i>Physical Review Research</i> , 2022, 4, .	3.6	8
3	Ion Acoustic Shock Wave Formation and Ion Acceleration in the Interactions of Pair Jets with Electron-Ion Plasmas. <i>Astrophysical Journal</i> , 2022, 931, 36.	4.5	4
4	Nonlocal thermal transport in magnetized plasma along different directions. <i>Matter and Radiation at Extremes</i> , 2022, 7, .	3.9	3
5	Relativistic-induced opacity of electron-positron plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 045010.	2.1	1
6	Mitigation of multibeam stimulated Raman scattering with polychromatic light. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 055006.	2.1	9
7	Generation of 100-MeV Attosecond Electron Bunches with Terawatt Few-Cycle Laser Pulses. <i>Physical Review Applied</i> , 2021, 15, .	3.8	11
8	Dynamics of moving electron vortices and magnetic ring in laser plasma interaction. <i>Physics of Plasmas</i> , 2021, 28, 042303.	1.9	4
9	Polarized proton acceleration in ultraintense laser interaction with near-critical-density plasmas. <i>Physical Review E</i> , 2021, 104, 015216.	2.1	9
10	Simulations of laser plasma instabilities using a particle-mesh method. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 095005.	2.1	3
11	Mitigating parametric instabilities in plasmas by sunlight-like lasers. <i>Matter and Radiation at Extremes</i> , 2021, 6, .	3.9	26
12	Control of transverse motion and x-ray emission of electrons accelerated in laser-driven wakefields by tuning laser spatial chirp. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 024002.	2.1	1
13	Growth, saturation, and collapse of laser-driven plasma density gratings. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	10
14	Stimulated Raman scattering in a non-eigenmode regime. <i>High Power Laser Science and Engineering</i> , 2020, 8, .	4.6	5
15	Extremely brilliant GeV γ -rays from a two-stage laser-plasma accelerator. <i>Science Advances</i> , 2020, 6, eaaz7240.	10.3	53
16	Radiation reaction induced harmonics generation in ultra-relativistic intense laser interaction with plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 055001.	2.1	0
17	Dense tunable attosecond electron bunch from laser interaction with magnetized plasma. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 055008.	2.1	1
18	Efficient generation of relativistic near-single-cycle mid-infrared pulses in plasmas. <i>Light: Science and Applications</i> , 2020, 9, 46.	16.6	18

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19	EuPRAXIA Conceptual Design Report. European Physical Journal: Special Topics, 2020, 229, 3675-4284.	2.6	64
20	Plasma modulator for high-power intense lasers. Optics Express, 2020, 28, 15794.	3.4	4
21	Betatron radiation polarization control by using an off-axis ionization injection in a laser wakefield acceleration. Optics Express, 2020, 28, 29927.	3.4	8
22	Suppression of parametric instabilities in inhomogeneous plasma with multi-frequency light. Plasma Physics and Controlled Fusion, 2019, 61, 115008.	2.1	16
23	Single-Cycle Terawatt Twisted-Light Pulses at Midinfrared Wavelengths above 10 μ m. Physical Review Applied, 2019, 12, .	3.8	18
24	Laser pulse compression towards collapse and beyond in plasma. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 055403.	1.5	9
25	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
26	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
27	Collimated GeV attosecond electron-positron bunches from a plasma channel driven by 10 PW lasers. Matter and Radiation at Extremes, 2019, 4, .	3.9	20
28	Eupraxia, A Step Toward A Plasma-Wakefield Based Accelerator With High Beam Quality. Journal of Physics: Conference Series, 2019, 1350, 012068.	0.4	2
29	High-quality high-order harmonic generation through preplasma truncation. Physical Review E, 2019, 100, 053207.	2.1	6
30	Mapping electromagnetic fields structure in plasma using a spin polarized electron beam. Physics of Plasmas, 2019, 26, .	1.9	6
31	Simultaneous polarization transformation and amplification of multi-petawatt laser pulses in magnetized plasmas. Optics Express, 2019, 27, 19319.	3.4	10
32	Nonlinear evolution of stimulated scattering near 1/4 critical density. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 195202.	0.5	1
33	Control of laser light by a plasma immersed in a tunable strong magnetic field. Optics Express, 2019, 27, 23529.	3.4	4
34	Multistage Coupling of Laser-Wakefield Accelerators with Curved Plasma Channels. Physical Review Letters, 2018, 120, 154801.	7.8	63
35	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
36	QED effects induced harmonics generation in extreme intense laser foil interaction. Plasma Physics and Controlled Fusion, 2018, 60, 044011.	2.1	5

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37	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
38	Ionization injection in a laser wakefield accelerator subject to a transverse magnetic field. New Journal of Physics, 2018, 20, 063031.	2.9	14
39	An angular-resolved multi-channel Thomson parabola spectrometer for laser-driven ion measurement. Review of Scientific Instruments, 2018, 89, 093302.	1.3	7
40	Ion beam bunching via phase rotation in cascading laser-driven ion acceleration. Physics of Plasmas, 2018, 25, 083116.	1.9	4
41	Bright attosecond γ -ray pulses from nonlinear Compton scattering with laser-illuminated compound targets. Applied Physics Letters, 2018, 112, .	3.3	44
42	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
43	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
44	Generation of GeV positron and γ -photon beams with controllable angular momentum by intense lasers. New Journal of Physics, 2018, 20, 083013.	2.9	36
45	Formation and evolution of a pair of collisionless shocks in counter-streaming flows. Scientific Reports, 2017, 7, 42915.	3.3	12
46	Large-Fluence Laser-Driven Ion Beam for Inertial Fusion Ignition. , 2017, , 775-782.		0
47	Cascaded acceleration of proton beams in ultrashort laser-irradiated microtubes. Physics of Plasmas, 2017, 24, .	1.9	3
48	Magnetic field annihilation and reconnection driven by femtosecond lasers in inhomogeneous plasma. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1.	5.1	3
49	Inhibition of stimulated Raman scattering due to the excitation of stimulated Brillouin scattering. Physics of Plasmas, 2017, 24, 092116.	1.9	3
50	Stimulated Raman scattering excited by incoherent light in plasma. Matter and Radiation at Extremes, 2017, 2, 190-196.	3.9	25
51	Effective suppression of parametric instabilities with decoupled broadband lasers in plasma. Physics of Plasmas, 2017, 24, .	1.9	29
52	Acceleration and radiation of externally injected electrons in laser plasma wakefield driven by a Laguerre-Gaussian pulse. Chinese Physics B, 2017, 26, 115204.	1.4	4
53	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
54	Directional enhancement of selected high-order-harmonics from intense laser irradiated blazed grating targets. Optics Express, 2017, 25, 23567.	3.4	9

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55	Extreme case of Faraday effect: magnetic splitting of ultrashort laser pulses in plasmas. <i>Optica</i> , 2017, 4, 1086.	9.3	42
56	Collisionless electrostatic shock formation and ion acceleration in intense laser interactions with near critical density plasmas. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	12
57	Plasma optical modulators for intense lasers. <i>Nature Communications</i> , 2016, 7, 11893.	12.8	29
58	Acceleration and evolution of a hollow electron beam in wakefields driven by a Laguerre-Gaussian laser pulse. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	42
59	Acceleration of on-axis and ring-shaped electron beams in wakefields driven by Laguerre-Gaussian pulses. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	23
60	Dynamics of boundary layer electrons around a laser wakefield bubble. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	9
61	Dense blocks of energetic ions driven by multi-petawatt lasers. <i>Scientific Reports</i> , 2016, 6, 22150.	3.3	27
62	A compact tunable polarized X-ray source based on laser-plasma helical undulators. <i>Scientific Reports</i> , 2016, 6, 29101.	3.3	33
63	Laser plasma wakefield based high quality electron acceleration and radiation source. , 2016, , .		0
64	Trapping of intense light in hollow shell. <i>Physics of Plasmas</i> , 2015, 22, 093110.	1.9	0
65	Reducing ion energy spread in hole-boring radiation pressure acceleration by using two-ion-species targets. <i>Laser and Particle Beams</i> , 2015, 33, 103-107.	1.0	7
66	Filamentation control and collimation of laser accelerated MeV protons. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 125013.	2.1	4
67	Absorption of ultrashort intense lasers in laser–solid interactions. <i>Chinese Physics B</i> , 2015, 24, 015201.	1.4	22
68	Effects of large laser bandwidth on stimulated Raman scattering instability in underdense plasma. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	19
69	æŷ€â...%ã, ã®1/2ã¹ç%ãç »ãñ1/2“ã,ã←æŷ€æ<%ãæ>¼æ•£ã°, „ã,ç”³ã®šæ€Ÿçš„æšãˆˆã””. <i>Scientia Sinica: Physica, Mechanica & Astronomia</i> , 2015, 40, 148-154.		
70	Quasi-monoenergetic ion generation by hole-boring radiation pressure acceleration in inhomogeneous plasmas using tailored laser pulses. <i>Physics of Plasmas</i> , 2014, 21, 012705.	1.9	22
71	Generation of quasi-monoenergetic carbon ions accelerated parallel to the plane of a sandwich target. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	7
72	Control of focusing fields for positron acceleration in nonlinear plasma wakes using multiple laser modes. <i>Physics of Plasmas</i> , 2014, 21, 120702.	1.9	16

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73	Effects of relativistic electron temperature on parametric instabilities for intense laser propagation in underdense plasma. <i>Physics of Plasmas</i> , 2014, 21, 112114.	1.9	16
74	Trapping of electromagnetic radiation in self-generated and preformed cavities. <i>Laser and Particle Beams</i> , 2013, 31, 589-595.	1.0	5
75	Monoenergetic collimated nano-Coulomb electron beams driven by crossed laser beams. <i>Applied Physics Letters</i> , 2013, 103, 024105.	3.3	1
76	Relativistic critical density increase and relaxation and high-power pulse propagation. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	29
77	Analysis of the Brunel model and resulting hot electron spectra. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	20
78	Ultra-intense laser pulse propagation in plasmas: from classic hole-boring to incomplete hole-boring with relativistic transparency. <i>New Journal of Physics</i> , 2012, 14, 063026.	2.9	54
79	Vlasov-Fokker-Planck Simulations for High-Power Laser-Plasma Interactions. <i>Communications in Computational Physics</i> , 2012, 11, 1236-1260.	1.7	2
80	From ablation to radiation pressure in intense laser-matter interaction. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 653, 168-171.	1.6	2
81	Plasma currents and inverse bremsstrahlung absorption under strong dc/ac electric fields. <i>Journal of Physics: Conference Series</i> , 2010, 244, 022072.	0.4	3
82	Stable plateau formation and Brillouin suppression in laser plasma. <i>Physics of Plasmas</i> , 2010, 17, 102707.	1.9	3
83	Nonlocal heat transport in laser-produced aluminum plasmas. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	7
84	Inverse bremsstrahlung absorption with nonlinear effects of high laser intensity and non-Maxwellian distribution. <i>Physical Review E</i> , 2009, 80, 056406.	2.1	26
85	Effects of laser and plasma parameters on shock wave generation and acceleration of protons. <i>Journal of Physics: Conference Series</i> , 2008, 112, 042046.	0.4	0
86	Plasma Currents and Electron Distribution Functions under a dc Electric Field of Arbitrary Strength. <i>Physical Review Letters</i> , 2008, 100, 185001.	7.8	14
87	Theoretical investigation on novel particle beams and radiation sources in relativistic laser-solid interactions. <i>Journal of Physics: Conference Series</i> , 2008, 112, 042030.	0.4	1
88	Intense laser-driven electrostatic shocks and its acceleration of ions in overdense plasmas. <i>Journal of Physics: Conference Series</i> , 2008, 112, 042032.	0.4	0
89	Inverse bremsstrahlung absorption with full electron-electron collisions operator. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022039.	0.4	2
90	Ion acceleration by colliding electrostatic shock waves in laser-solid interaction. <i>Physics of Plasmas</i> , 2007, 14, 113106.	1.9	36

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91	Acceleration dynamics of ions in shocks and solitary waves driven by intense laser pulses. Physical Review E, 2007, 76, 035402.	2.1	33
92	Inverse bremsstrahlung absorption and the evolution of electron distributions accounting for electron-electron collisions. Physics of Plasmas, 2006, 13, 113302.	1.9	16