Wei-min Wang

List of Publications by Year
in descending order

125 papers	2,648 citations	172457 29 h-index	214800 47 g-index
127 all docs	127 docs citations	127 times ranked	1801 citing authors

#	Article	IF	Citations
1	Direct observation of turbulent magnetic fields in hot, dense laser produced plasmas. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8011-8015.	7.1	142
2	Near-Complete Absorption of Intense, Ultrashort Laser Light by Sub-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î»</mml:mi></mml:math>Gratings. Physical Review Letters, 2008, 101, 145001.	7.8	117
3	Strong terahertz pulse generation by chirped laser pulses in tenuous gases. Optics Express, 2008, 16, 16999.	3.4	97
4	Demonstration of Coherent Terahertz Transition Radiation from Relativistic Laser-Solid Interactions. Physical Review Letters, 2016, 116, 205003.	7.8	96
5	Multimillijoule coherent terahertz bursts from picosecond laser-irradiated metal foils. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3994-3999.	7.1	87
6	Tunable Circularly Polarized Terahertz Radiation from Magnetized Gas Plasma. Physical Review Letters, 2015, 114, 253901.	7.8	82
7	Observation of Terahertz Radiation via the Two-Color Laser Scheme with Uncommon Frequency Ratios. Physical Review Letters, 2017, 119, 235001.	7.8	82
8	Magnetically Assisted Fast Ignition. Physical Review Letters, 2015, 114, 015001.	7.8	74
9	Strong terahertz radiation from relativistic laser interaction with solid density plasmas. Applied Physics Letters, 2012, 100, .	3.3	70
10	Bright betatron X-ray radiation from a laser-driven-clustering gas target. Scientific Reports, 2013, 3, 1912.	3.3	70
11	Double-cone ignition scheme for inertial confinement fusion. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200015.	3.4	70
12	Effects of laser-plasma interactions on terahertz radiation from solid targets irradiated by ultrashort intense laser pulses. Physical Review E, 2011, 84, 036405.	2.1	61
13	Bursts of Terahertz Radiation from Large-Scale Plasmas Irradiated by Relativistic Picosecond Laser Pulses. Physical Review Letters, 2015, 114, 255001.	7.8	60
14	Intense High-Contrast Femtosecond<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>K</mml:mi></mml:math>-Shell X-Ray Source from Laser-Driven Ar Clusters. Physical Review Letters, 2010, 104, 215004.	7.8	59
15	Strong Terahertz Radiation from a Liquid-Water Line. Physical Review Applied, 2019, 12, .	3.8	57
16	Extremely brilliant GeV Î³-rays from a two-stage laser-plasma accelerator. Science Advances, 2020, 6, eaaz7240.	10.3	53
17	Efficient terahertz emission by mid-infrared laser pulses from gas targets. Optics Letters, 2011, 36, 2608.	3.3	50
18	Laser absorption and hot electron temperature scalings in laserâ€“plasma interactions. Plasma Physics and Controlled Fusion, 2013, 55, 085008.	2.1	46

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19	A model for the efficient coupling between intense lasers and subwavelength grating targets. Physics of Plasmas, 2008, 15, .	1.9	45
20	Production of Highly Polarized Positron Beams via Helicity Transfer from Polarized Electrons in a Strong Laser Field. Physical Review Letters, 2020, 125, 044802.	7.8	45
21	Towards gigawatt terahertz emission by few-cycle laser pulses. Physics of Plasmas, 2011, 18, .	1.9	43
22	Integrated simulation approach for laser-driven fast ignition. Physical Review E, 2015, 91, 013101.	2.1	39
23	Strong magnetic fields generated with a simple open-ended coil irradiated by high power laser pulses. Applied Physics Letters, 2015, 107, .	3.3	36
24	Collimated ultrabright gamma rays from electron wiggling along a petawatt laser-irradiated wire in the QED regime. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9911-9916.	7.1	36
25	Enhanced K_Î± output of Ar and Kr using size optimized cluster target irradiated by high-contrast laser pulses. Optics Express, 2011, 19, 25812.	3.4	32
26	Broadband supercontinuum generation in air using tightly focused femtosecond laser pulses. Optics Letters, 2011, 36, 3900.	3.3	32
27	Electron acceleration via high contrast laser interacting with submicron clusters. Applied Physics Letters, 2012, 100, .	3.3	32
28	Collisionless shockwaves formed by counter-streaming laser-produced plasmas. New Journal of Physics, 2011, 13, 093001.	2.9	30
29	Terahertz radiation by two-color lasers due to the field ionization of gases. Physical Review E, 2013, 87, .	2.1	30
30	Generation of tens of GeV quasi-monoenergetic proton beams from a moving double layer formed by ultraintense lasers at intensity 10²¹â€“10²³â€‰Wâ€‰cm^{â^'2}. New Journal of Physics, 2010, 12, 045021.	2.9	29
31	Long lifetime air plasma channel generated by femtosecond laser pulse sequence. Optics Express, 2012, 20, 5968.	3.4	29
32	Generation of highly-polarized high-energy brilliant Î³-rays via laser-plasma interaction. Matter and Radiation at Extremes, 2020, 5, .	3.9	29
33	Single-cycle strong terahertz pulse generation from a vacuum-plasma interface driven by intense laser pulses. Physical Review E, 2009, 79, 046411.	2.1	27
34	Strong terahertz radiation from air plasmas generated by an aperture-limited Gaussian pump laser beam. Applied Physics Letters, 2009, 94, .	3.3	27
35	High power terahertz pulses generated in intense laserâ€”plasma interactions. Chinese Physics B, 2012, 21, 095203.	1.4	27
36	Spin-polarization effects of an ultrarelativistic electron beam in an ultraintense two-color laser pulse. Physical Review A, 2019, 100, .	2.5	25

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37	Towards Terawatt-Scale Spectrally Tunable Terahertz Pulses via Relativistic Laser-Foil Interactions. Physical Review X, 2020, 10, .	8.9	25
38	Four-dimensional imaging of the initial stage of fast evolving plasmas. Applied Physics Letters, 2010, 97, .	3.3	24
39	Terahertz emission driven by two-color laser pulses at various frequency ratios. Physical Review A, 2017, 96, .	2.5	24
40	Absorption of ultrashort intense lasers in laserâ€“solid interactions. Chinese Physics B, 2015, 24, 015201.	1.4	22
41	Intense terahertz radiation from relativistic laserâ€“plasma interactions. Plasma Physics and Controlled Fusion, 2017, 59, 014039.	2.1	22
42	Terahertz emission from two-plasmon-decay induced transient currents in laser-solid interactions. Physics of Plasmas, 2016, 23, .	1.9	21
43	Laser opacity in underdense preplasma of solid targets due to quantum electrodynamics effects. Physical Review E, 2017, 96, 013201.	2.1	21
44	Role of resonance absorption in terahertz radiation generation from solid targets. Optics Express, 2014, 22, 11797.	3.4	20
45	Controlled electron injection into laser wakefields with a perpendicular injection laser pulse. Applied Physics Letters, 2008, 93, 201502.	3.3	19
46	Controllable far-infrared electromagnetic radiation from plasmas applied by dc or ac bias electric fields. Journal of Applied Physics, 2010, 107, 023113.	2.5	18
47	Direct observation of ultrafast surface transport of laser-driven fast electrons in a solid target. Physics of Plasmas, 2013, 20, .	1.9	18
48	Preferential enhancement of laser-driven carbon ion acceleration from optimized nanostructured surfaces. Scientific Reports, 2015, 5, 11930.	3.3	18
49	Bremsstrahlung emission profile from intense laser-solid interactions as a function of laser focal spot size. Plasma Physics and Controlled Fusion, 2019, 61, 034001.	2.1	17
50	Water-Based Coherent Detection of Broadband Terahertz Pulses. Physical Review Letters, 2022, 128, 093902.	7.8	17
51	Terahertz radiation enhanced by target ablation during the interaction of high intensity laser pulse and micron-thickness metal foil. Physics of Plasmas, 2020, 27, .	1.9	16
52	Surface-plasmon-enhanced MeV ions from femtosecond laser irradiated, periodically modulated surfaces. Physics of Plasmas, 2012, 19, 030703.	1.9	15
53	Backward terahertz radiation from intense laser-solid interactions. Optics Express, 2016, 24, 4010.	3.4	15
54	Particle simulation of filamentary structure formation in dielectric barrier discharge. Applied Physics Letters, 2013, 102, .	3.3	14

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55	Strong, tunable terahertz emission by two-color picosecond laser irradiation. Physical Review A, 2014, 90, .	2.5	14
56	Effect of laser parameters on electron injection into laser wakefields in plasma with a counterpropagating additional laser pulse. Physics of Plasmas, 2008, 15, 013101.	1.9	13
57	Monoenergetic electron bunches generated from thin solid foils irradiated by ultrashort, ultraintense circularly polarized lasers. Physical Review Special Topics: Accelerators and Beams, 2010, 13, .	1.8	13
58	Directional transport of fast electrons at the front target surface irradiated by intense femtosecond laser pulses with preformed plasma. Laser and Particle Beams, 2012, 30, 39-43.	1.0	13
59	Electromagnetic Emission from Laser Wakefields in Magnetized Underdense Plasmas. Plasma Science and Technology, 2012, 14, 874-879.	1.5	12
60	Dense Polarized Positrons from Laser-Irradiated Foil Targets in the QED Regime. Physical Review Letters, 2022, 129, .	7.8	12
61	Quasimonoenergetic proton bunches generation from doped foil targets irradiated by intense lasers. Physics of Plasmas, 2013, 20, 024502.	1.9	11
62	Low-voltage and high-performance buzzer-scanner based streamlined atomic force microscope system. Nanotechnology, 2013, 24, 455503.	2.6	11
63	High-speed atomic force microscope based on an astigmatic detection system. Review of Scientific Instruments, 2014, 85, 103710.	1.3	11
64	Probing the laser wakefield in underdense plasmas by induced terahertz emission. Physics of Plasmas, 2013, 20, 080702.	1.9	10
65	Upper limit power for self-guided propagation of intense lasers in plasma. Applied Physics Letters, 2012, 101, .	3.3	9
66	Optical imaging module for astigmatic detection system. Review of Scientific Instruments, 2016, 87, 053706.	1.3	9
67	Electron injection into laser wakefields by colliding circularly-polarized laser pulses. Laser and Particle Beams, 2009, 27, 3-7.	1.0	8
68	High contrast femtosecond laser-driven intense hard X-ray source for imaging application. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 619, 128-132.	1.6	8
69	THz emission control by tuning density profiles of neutral gas targets during intense laser-gas interaction. Applied Physics Letters, 2012, 101, .	3.3	8
70	Numerical studies of third-harmonic generation in laser filament in air perturbed by plasma spot. Physics of Plasmas, 2012, 19, 072305.	1.9	8
71	The evolution of the transverse centroid of asymmetric laser field in plasmas with various density distributions. Physics of Plasmas, 2006, 13, 053112.	1.9	7
72	Collimated quasi-monoenergetic electron beam generation from intense laser solid interaction. High Energy Density Physics, 2013, 9, 578-582.	1.5	7

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73	Note: A new angle-resolved proton energy spectrometer. Review of Scientific Instruments, 2013, 84, 096103.	1.3	7
74	Particle simulation of mode transition in dielectric barrier discharges at different gas pressures. Journal Physics D: Applied Physics, 2013, 46, 475208.	2.8	7
75	Controllability of intense-laser ion acceleration. High Power Laser Science and Engineering, 2014, 2, .	4.6	7
76	Intense Î³ ray generated by refocusing laser pulse on wakefield accelerated electrons. Physics of Plasmas, 2017, 24, .	1.9	7
77	Gamma-ray emission from wakefield-accelerated electrons wiggling in a laser field. Scientific Reports, 2019, 9, 2531.	3.3	7
78	Spin and polarization effects on the nonlinear Breitâ€“Wheeler pair production in laser-plasma interaction. New Journal of Physics, 2021, 23, 075005.	2.9	7
79	Electron energy deposition to the fusion target core for fast ignition. Journal of Physics: Conference Series, 2010, 244, 022070.	0.4	6
80	Two-stage acceleration of protons from relativistic laser-solid interaction. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	6
81	Electromagnetic emission from laser wakefields in underdense magnetized plasmas. Journal of Plasma Physics, 2012, 78, 421-427.	2.1	6
82	Effect of target shape on fast electron emission in femtosecond laser-plasma interactions. Physical Review E, 2008, 77, 016406.	2.1	5
83	Mechanisms of electron injection into laser wakefields by a weak counter-propagating pulse. European Physical Journal: Special Topics, 2009, 175, 49-55.	2.6	5
84	Optimization for deuterium ion acceleration in foam targets by ultra-intense lasers. Laser and Particle Beams, 2010, 28, 333-341.	1.0	5
85	Micro focusing of fast electrons with opened cone targets. Physics of Plasmas, 2012, 19, 013103.	1.9	5
86	Upper-limit power for self-guided propagation of intense lasers in underdense plasma. High Power Laser Science and Engineering, 2013, 1, 74-79.	4.6	5
87	Generation of quasi-monoenergetic electron beams with small normalized divergences angle from a 2 TW laser facility. Optics Express, 2014, 22, 12836.	3.4	5
88	Quasimonoenergetic Proton Acceleration via Quantum Radiative Compression. Physical Review Applied, 2022, 17, .	3.8	5
89	Studies on the mechanisms of powerful terahertz radiations from laser plasmas (Invited Paper). Chinese Optics Letters, 2011, 9, 110002-110008.	2.9	4
90	Towards Sub-TeV electron beams driven by ultra-short, ultra-intense laser pulses. Journal of Plasma Physics, 2012, 78, 461-468.	2.1	4

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91	Quantum-stochasticity-induced asymmetry in the angular distribution of electrons in a quasiclassical regime. Physical Review A, 2020, 102, .	2.5	4
92	Generation of polarized positron beams via collisions of ultrarelativistic electron beams. Physical Review Research, 2021, 3, .	3.6	4
93	Angular distribution of terahertz emission from laser interactions with solid targets. Science China Information Sciences, 2012, 55, 43-48.	4.3	3
94	High-order optical vortex harmonics generated by relativistic femtosecond laser pulse. Chinese Physics B, 2015, 24, 065202.	1.4	3
95	Guided propagation of extremely intense lasers in plasma via ion motion. Physical Review E, 2020, 101, 011201.	2.1	3
96	Acceleration of Protons from a Double-Layer or Multi-Ion-Mixed Foil Irradiated by Ultraintense Lasers. Plasma Science and Technology, 2010, 12, 277-283.	1.5	2
97	Single-Shot Broad Bandwidth Terahertz Pulse Measurement. Plasma Science and Technology, 2012, 14, 20-23.	1.5	2
98	Polarization of terahertz emission out of incident plane from laser interactions with solid targets. Science China: Physics, Mechanics and Astronomy, 2012, 55, 589-592.	5.1	2
99	The influence of target material and thickness on proton energy and angular distribution. Science China: Physics, Mechanics and Astronomy, 2013, 56, 457-461.	5.1	2
100	Angle-dependent modulated spectral peaks of proton beams generated in ultrashort intense laser-solid interactions. Physics of Plasmas, 2014, 21, 093111.	1.9	2
101	Proton angular distribution research by a new angle-resolved proton energy spectrometer. Science China: Physics, Mechanics and Astronomy, 2014, 57, 844-848.	5.1	2
102	Studies of powerful terahertz radiation from laser-produced plasmas. , 2015, , .		2
103	Low-frequency whistler waves excited by relativistic laser pulses. Physical Review E, 2020, 102, 053204.	2.1	2
104	Theoretical and experimental studies on terahertz radiation from laser-driven air plasma. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 124202.	0.5	2
105	Origin of energetic carbon ions with different charge states in ultrashort laser-thin foil interactions. Wuli Xuebao/Acta Physica Sinica, 2013, 62, 165201.	0.5	2
106	Ion acceleration in the interaction of an intense laser pulse with structured plasma. Physica Scripta, 2008, 77, 065502.	2.5	1
107	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
108	Terahertz emission in tenuous gases irradiated by ultrashort laser pulses. Chinese Physics C, 2009, 33, 142-145.	3.7	1

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109	Single-Shot Measurement of Broad Bandwidth Terahertz Pulses. Chinese Physics Letters, 2012, 29, 015202.	3.3	1
110	Electromagnetic radiation from laser wakefields in underdense plasma. High Power Laser Science and Engineering, 2014, 2, .	4.6	1
111	Laboratory Study on Disconnection Events in Comets. Scientific Reports, 2018, 8, 463.	3.3	1
112	Energy enhancement of the target surface electron by using a 200 TW sub-picosecond laser. Optics Letters, 2018, 43, 3909.	3.3	1
113	Effects of internal target structures on laser-driven neutron production. Nuclear Fusion, 2019, 59, 076032.	3.5	1
114	Enhanced ion acceleration in the relativistic transparent regime due to the laser rising edge. Plasma Physics and Controlled Fusion, 2021, 63, 035016.	2.1	1
115	Research progress of ultrabright Î³-ray radiation and electron-positron pair production driven by extremely intense laser fields. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 085202-085202.	0.5	1
116	Ultrahigh-energy electron beam generated by ultra-intense circularly polarized laser pulses. Wuli Xuebao/Acta Physica Sinica, 2015, 64, 144102.	0.5	1
117	Enhanced hot electron generation via laser interference. Physics of Plasmas, 2022, 29, .	1.9	1
118	Terahertz radiation from electrically-biased tenuous plasmas. , 2009, , .		0
119	Efficient high-quality ion beam generation in laser-foil interaction. Proceedings of SPIE, 2010, , .	0.8	0
120	Studies of the mechanisms of powerful Terahertz radiation from laser plasmas. , 2013, , .		0
121	Upper-limit power for self-guided propagation of intense lasers in underdense plasma â€“ CORRIGENDUM. High Power Laser Science and Engineering, 2013, 1, 148-148.	4.6	0
122	Production of intense attosecond vector beam pulse trains based on harmonics. Chinese Physics B, 2015, 24, 115203.	1.4	0
123	Bursts of terahertz radiation from relativistic laser-plasma interactions. EPJ Web of Conferences, 2017, 149, 05010.	0.3	0
124	Theoretical Study of the Efficient Ion Acceleration Driven by Petawatt-Class Lasers via Stable Radiation Pressure Acceleration. Applied Sciences (Switzerland), 2022, 12, 2924.	2.5	0
125	Ultrafast probing of plasma ion temperature in protonâ€“boron fusion by nuclear resonance fluorescence emission spectroscopy. Matter and Radiation at Extremes, 2022, 7, 035901.	3.9	0