Baifei Shen

List of Publications by Year in descending order

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99 papers	2,086 citations	236925 25 h-index	265206 42 g-index
101 all docs	101 docs citations	101 times ranked	1057 citing authors

#	Article	IF	Citations
1	Radiation-Reaction Trapping of Electrons in Extreme Laser Fields. Physical Review Letters, 2014, 112, 145003.	7.8	147
2	Efficient GeV ion generation by ultraintense circularly polarized laser pulse. Physics of Plasmas, 2007, 14, .	1.9	118
3	Generation of Intense High-Order Vortex Harmonics. Physical Review Letters, 2015, 114, 173901.	7.8	117
4	Multistaged acceleration of ions by circularly polarized laser pulse: Monoenergetic ion beam generation. Physics of Plasmas, 2007, 14, .	1.9	95
5	Light Fan Driven by a Relativistic Laser Pulse. Physical Review Letters, 2014, 112, 235001.	7.8	95
6	Exploring vacuum birefringence based on a 100 PW laser and an x-ray free electron laser beam. Plasma Physics and Controlled Fusion, 2018, 60, 044002.	2.1	90
7	Transparency of an overdense plasma layer. Physical Review E, 2001, 64, 056406.	2.1	86
8	Energy partition, Î³-ray emission, and radiation reaction in the near-quantum electrodynamical regime of laser-plasma interaction. Physics of Plasmas, 2014, 21, 023109.	1.9	76
9	Terawatt-scale optical half-cycle attosecond pulses. Scientific Reports, 2018, 8, 2669.	3.3	70
10	Magnetic Field Generation in Plasma Waves Driven by Copropagating Intense Twisted Lasers. Physical Review Letters, 2018, 121, 145002.	7.8	63
11	Hollow screw-like drill in plasma using an intense Laguerreâ€“Gaussian laser. Scientific Reports, 2015, 5, 8274.	3.3	51
12	Bright X-Ray Source from a Laser-Driven Microplasma Waveguide. Physical Review Letters, 2016, 116, 115001.	7.8	47
13	Operating plasma density issues on large-scale laser-plasma accelerators toward high-energy frontier. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	46
14	Relativistic laser driven electron accelerator using micro-channel plasma targets. Physics of Plasmas, 2019, 26, .	1.9	45
15	Collisionless Shock Acceleration of High-Flux Quasimonoenergetic Proton Beams Driven by Circularly Polarized Laser Pulses. Physical Review Letters, 2017, 119, 164801.	7.8	43
16	Ultrashort megaelectronvolt positron beam generation based on laser-accelerated electrons. Physics of Plasmas, 2016, 23, .	1.9	41
17	Particle-in-cell simulation of x-ray wakefield acceleration and betatron radiation in nanotubes. Physical Review Accelerators and Beams, 2016, 19, .	1.6	38
18	New Optical Manipulation of Relativistic Vortex Cutter. Physical Review Letters, 2019, 122, 024801.	7.8	35

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19	Positron acceleration in a hollow plasma channel up to TeV regime. Scientific Reports, 2014, 4, 4171.	3.3	33
20	Polarized electron-beam acceleration driven by vortex laser pulses. New Journal of Physics, 2019, 21, 073052.	2.9	33
21	High-quality monoenergetic proton generation by sequential radiation pressure and bubble acceleration. Physical Review Special Topics: Accelerators and Beams, 2009, 12, .	1.8	32
22	Efficient acceleration of monoenergetic proton beam by sharp front laser pulse. Physics of Plasmas, 2011, 18, 013103.	1.9	29
23	Generation of gamma-ray beam with orbital angular momentum in the QED regime. Physics of Plasmas, 2016, 23, .	1.9	28
24	Polarized electron acceleration in beam-driven plasma wakefield based on density down-ramp injection. Physical Review E, 2019, 100, 043202.	2.1	27
25	Ultrahigh energy proton generation in sequential radiation pressure and bubble regime. Physics of Plasmas, 2010, 17, .	1.9	25
26	Deflection of a Reflected Intense Vortex Laser Beam. Physical Review Letters, 2016, 117, 113904.	7.8	23
27	Scheme for proton-driven plasma-wakefield acceleration of positively charged particles in a hollow plasma channel. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	22
28	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
29	Ultrafast multi-MeV gamma-ray beam produced by laser-accelerated electrons. Physics of Plasmas, 2017, 24, 093104.	1.9	22
30	Ion acceleration with mixed solid targets interacting with circularly polarized lasers. Physical Review Special Topics: Accelerators and Beams, 2009, 12, .	1.8	21
31	Ultra-intense single attosecond pulse generated from circularly polarized laser interacting with overdense plasma. Physics of Plasmas, 2011, 18, 083104.	1.9	19
32	Effects of nanosecond-scale prepulse on generation of high-energy protons in target normal sheath acceleration. Applied Physics Letters, 2013, 102, .	3.3	19
33	High-energy monoenergetic proton bunch from laser interaction with a complex target. Physics of Plasmas, 2009, 16, .	1.9	18
34	Instabilities in interaction of circularly polarized laser pulse and overdense target. Physics of Plasmas, 2011, 18, .	1.9	17
35	Spin-polarized proton beam generation from gas-jet targets by intense laser pulses. Physical Review E, 2020, 102, 011201.	2.1	17
36	Generation of a large amount of energetic electrons in complex-structure bubble. New Journal of Physics, 2010, 12, 023037.	2.9	16

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37	Quantum reflection above the classical radiation-reaction barrier in the quantum electro-dynamics regime. Communications Physics, 2019, 2, .	5.3	16
38	Relativistic magnetic reconnection driven by a laser interacting with a micro-scale plasma slab. Nature Communications, 2018, 9, 1601.	12.8	15
39	Spin-dependent radiative deflection in the quantum radiation-reaction regime. New Journal of Physics, 2020, 22, 013007.	2.9	15
40	Spin Filter for Polarized Electron Acceleration in Plasma Wakefields. Physical Review Applied, 2020, 13, .	3.8	15
41	Generation of plasma intrinsic oscillation at the front surface of a target irradiated by a circularly polarized laser pulse. Physics of Plasmas, 2009, 16, .	1.9	14
42	Laser plasma accelerator driven by a super-Gaussian pulse. Journal of Plasma Physics, 2012, 78, 447-453.	2.1	14
43	Effects of micro-structures on laser-proton acceleration. Physics of Plasmas, 2018, 25, 103109.	1.9	14
44	Comment on â€œGenerating High-Current Monoenergetic Proton Beams by a Circularly Polarized Laser Pulse in the Phase-Stable Acceleration Regimeâ€• Physical Review Letters, 2009, 102, 239501; author reply 239502.	7.8	12
45	Multi-stage proton acceleration controlled by double beam image technique. Physics of Plasmas, 2018, 25, 063116.	1.9	11
46	Driving positron beam acceleration with coherent transition radiation. Communications Physics, 2020, 3, .	5.3	11
47	Electron beam dynamics and self-cooling up to PeV level due to betatron radiation in plasma-based accelerators. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	10
48	Single-pulse laser-electron collision within a micro-channel plasma target. Plasma Physics and Controlled Fusion, 2019, 61, 065019.	2.1	10
49	The emission of Î³-Ray beams with orbital angular momentum in laser-driven micro-channel plasma target. Scientific Reports, 2019, 9, 18780.	3.3	10
50	Spectrum tailoring of low charge-to-mass ion beam by the triple-stage acceleration mechanism. Physics of Plasmas, 2019, 26, .	1.9	9
51	High-repetition-rate few-attosecond high-quality electron beams generated from crystals driven by intense X-ray laser. Matter and Radiation at Extremes, 2020, 5, .	3.9	9
52	Electron acceleration by a propagating laser pulse in vacuum. Physics of Plasmas, 2007, 14, 083102.	1.9	8
53	Effects of pulse duration and areal density on ultrathin foil acceleration. Physics of Plasmas, 2010, 17, .	1.9	8
54	Direct acceleration of electrons by a CO2 laser in a curved plasma waveguide. Scientific Reports, 2016, 6, 28147.	3.3	8

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55	Transparency of near-critical density plasmas under extreme laser intensities. New Journal of Physics, 2018, 20, 053043.	2.9	8
56	XFEL beamline design for vacuum birefringence experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 982, 164553.	1.6	8
57	Vortex Harmonic Generation by Circularly Polarized Gaussian Beam Interacting with Tilted Target. Physical Review Applied, 2021, 16, .	3.8	8
58	Spin-to-orbital angular momentum conversion in harmonic generation driven by intense circularly polarized laser. New Journal of Physics, 2020, 22, 013054.	2.9	7
59	High efficiency laser-driven proton sources using 3D-printed micro-structure. Communications Physics, 2022, 5, .	5.3	7
60	Focal spot effects on the generation of proton beams during target normal sheath acceleration. Plasma Physics and Controlled Fusion, 2016, 58, 025010.	2.1	6
61	Ultra-bright, well-collimated, GeV gamma-ray production in the QED regime. Physics of Plasmas, 2018, 25, .	1.9	6
62	Vortex beam of tilted orbital angular momentum generated from grating. Plasma Physics and Controlled Fusion, 2019, 61, 105001.	2.1	6
63	Two-beam vacuum wave mixing using high-power laser and x-ray free-electron laser. Physical Review D, 2019, 100, .	4.7	6
64	Monoenergetic proton beam accelerated by single reflection mechanism only during hole-boring stage. High Power Laser Science and Engineering, 2019, 7, .	4.6	6
65	Generation of relativistic positrons carrying intrinsic orbital angular momentum. Physical Review D, 2021, 104, .	4.7	6
66	Twisted Breit-Wheeler electron-positron pair creation via vortex gamma photons. Physical Review Research, 2021, 3, .	3.6	6
67	Overloading effect of energetic electrons in the bubble regime of laser wakefield acceleration. Physics of Plasmas, 2010, 17, 103108.	1.9	5
68	Radiation from laser-microplasma-waveguide interactions in the ultra-intense regime. Physics of Plasmas, 2016, 23, .	1.9	5
69	Angular momentum oscillation in spiral-shaped foil plasmas. New Journal of Physics, 2019, 21, 043022.	2.9	5
70	Spin-dependent two-photon Bragg scattering in the Kapitza-Dirac effect. Physical Review A, 2020, 102, .	2.5	5
71	New phase-matching selection rule to generate angularly isolated harmonics. High Power Laser Science and Engineering, 2021, 9, .	4.6	5
72	Inertial confinement fusion driven by long wavelength electromagnetic pulses. High Power Laser Science and Engineering, 2013, 1, 105-109.	4.6	4

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73	Proton acceleration in a laser-induced relativistic electron vortex. Journal of Plasma Physics, 2019, 85, .	2.1	4
74	Leveraging radiation reaction via laser-driven plasma fields. Plasma Physics and Controlled Fusion, 2019, 61, 065007.	2.1	4
75	Proton array focused by a laser-irradiated mesh. Applied Physics Letters, 2019, 114, .	3.3	4
76	Ultrafast measurements of ion temperature in high-energy-density plasmas by nuclear resonance fluorescence. Physics of Plasmas, 2019, 26, .	1.9	3
77	Isolated intense half-cycle attosecond pulse generation with orbital angular momentum. Plasma Physics and Controlled Fusion, 2021, 63, 035013.	2.1	3
78	Quasimonochromatic Bright Gamma-ray Generation from Synchronized Compton Scattering via Azimuthal Spatial-Temporal Coupling. Physical Review Applied, 2022, 17, .	3.8	3
79	Crater-like structures induced by intense laser. Applied Physics Letters, 2017, 111, 184104.	3.3	2
80	Laser-driven ultrafast antiproton beam. Physics of Plasmas, 2018, 25, 023111.	1.9	2
81	Effects of radiation reaction on laser proton acceleration in the bubble regime. Physics of Plasmas, 2018, 25, .	1.9	2
82	Spatiotemporal instabilities of terahertz OAM beams from air plasma via chirping a few-cycle vortex pump field. Journal of Optics (India), 0, , 1.	1.7	2
83	Improving the accuracy of hard photon emission by sigmoid sampling of the quantum-electrodynamic table in particle-in-cell Monte Carlo simulations. Physical Review E, 2022, 105, 025309.	2.1	2
84	Enhancement of vacuum diffraction by interference of signals produced by a probe x-ray free-electron laser with multiple transverse modes. Physical Review A, 2022, 106, .	2.5	2
85	Proton acceleration by plasma wakefield driven by an intense proton beam. Laser and Particle Beams, 2013, 31, 427-438.	1.0	1
86	Nanocontrol of single dense energetic electron sheet in a chirped pulse with critical relativistic intensity. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	1
87	Ultrafast gamma-ray line emission driven by laser-accelerated ion beams. AIP Advances, 2018, 8, 115319.	1.3	1
88	Generation of collimated electron jets from plasma under applied electromagnetostatic field. Laser and Particle Beams, 2018, 36, 384-390.	1.0	1
89	Autocorrelation pulse-duration measurement of relativistic femtosecond laser. Physics of Plasmas, 2018, 25, 073101.	1.9	1
90	Asymmetric optical vortex in plasma density gradient. Plasma Physics and Controlled Fusion, 2019, 61, 125003.	2.1	1

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91	Stimulated Raman sidescattering in intense laser produced plasmas with steep density gradients. Plasma Physics and Controlled Fusion, 2019, 61, 075009.	2.1	1
92	Compressing magnetic field into a high-intensity electromagnetic field with a relativistic flying mirror. Optics Express, 2021, 29, 41121.	3.4	1
93	Triple-vortex bremsstrahlung. New Journal of Physics, 2022, 24, 043037.	2.9	1
94	Condition of laser pulse width for relativistic self-focusing. Science Bulletin, 1997, 42, 555-557.	1.7	0
95	The Diagnostics of Density Distribution for Dense Hot DT Plasmas Using Fast Protons. The Review of Laser Engineering, 2008, 36, 1150-1152.	0.0	0
96	Layered structure in the interaction of thin foil with two laser pulses. Physics of Plasmas, 2014, 21, 024502.	1.9	0
97	Generation of dense and well-collimated positron beam via ultra-intense laser colliding with a flying plasma layer. Plasma Physics and Controlled Fusion, 2022, 64, 045008.	2.1	0
98	Finite orbital-angular-momentum carried by the final electron and photon in plane-wave electron-nucleus bremsstrahlung. Physical Review Research, 2022, 4, .	3.6	0
99	Ultra-fast polarization of a thin electron layer in the rotational standing-wave field driven by double ultra-intense laser pulses. New Journal of Physics, 0, , .	2.9	0