

# Weiming An

## List of Publications by Year in descending order

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42  
papers

1,514  
citations

394421

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docs citations

44  
times ranked

841  
citing authors

#	ARTICLE	IF	CITATIONS
1	The optimal beam-loading in two-bunch nonlinear plasma wakefield accelerators. <i>Plasma Physics and Controlled Fusion</i> , 2022, 64, 065007.	2.1	0
2	Highly spin-polarized multi-GeV electron beams generated by single-species plasma photocathodes. <i>Physical Review Research</i> , 2022, 4, .	3.6	1
3	A new field solver for modeling of relativistic particle-laser interactions using the particle-in-cell algorithm. <i>Computer Physics Communications</i> , 2021, 258, 107580.	7.5	14
4	A quasi-static particle-in-cell algorithm based on an azimuthal Fourier decomposition for highly efficient simulations of plasma-based acceleration: QPAD. <i>Computer Physics Communications</i> , 2021, 261, 107784.	7.5	10
5	Generation of High-Energy Spin-Polarized Electrons in a Beam-Driven Plasma Wakefield Accelerator. <i>Physical Review Letters</i> , 2021, 126, 054801.	7.8	28
6	High Efficiency Uniform Wakefield Acceleration of a Positron Beam Using Stable Asymmetric Mode in a Hollow Channel Plasma. <i>Physical Review Letters</i> , 2021, 127, 174801.	7.8	22
7	On numerical errors to the fields surrounding a relativistically moving particle in PIC codes. <i>Journal of Computational Physics</i> , 2020, 413, 109451.	3.8	14
8	Emittance preservation through density ramp matching sections in a plasma wakefield accelerator. <i>Physical Review Accelerators and Beams</i> , 2020, 23, .	1.6	13
9	Generating high quality ultrarelativistic electron beams using an evolving electron beam driver. <i>Physical Review Accelerators and Beams</i> , 2020, 23, .	1.6	10
10	Producing multi-coloured bunches through beam-induced ionization injection in plasma wakefield accelerator. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20180184.	3.4	4
11	Betatron radiation and emittance growth in plasma wakefield accelerators. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20180173.	3.4	4
12	Near-Ideal Dechirper for Plasma-Based Electron and Positron Acceleration Using a Hollow Channel Plasma. <i>Physical Review Applied</i> , 2019, 12, .	3.8	10
13	Positron beam extraction from an electron-beam-driven plasma wakefield accelerator. <i>Physical Review Accelerators and Beams</i> , 2019, 22, .	1.6	5
14	Plasma wakefield acceleration experiments at FACET II. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 034001.	2.1	63
15	Measurement of Transverse Wakefields Induced by a Misaligned Positron Bunch in a Hollow Channel Plasma Accelerator. <i>Physical Review Letters</i> , 2018, 120, 124802.	7.8	38
16	Summary of Working Group 2: Computations for Accelerator Physics. , 2018, , .		0
17	Mitigation Techniques for Witness Beam Hosing in Plasma - Based Acceleration. , 2018, , .		1
18	Generation and Acceleration of the Trailing Positron Bunch Using a Drive- Trailing Electron Bunch Configuration. , 2018, , .		0

#	ARTICLE	IF	CITATIONS
19	Controlling the numerical Cerenkov instability in PIC simulations using a customized finite difference Maxwell solver and a local FFT based current correction. Computer Physics Communications, 2017, 214, 6-17.	7.5	35
20	Acceleration of a trailing positron bunch in a plasma wakefield accelerator. Scientific Reports, 2017, 7, 14180.	3.3	32
21	Ion Motion Induced Emittance Growth of Matched Electron Beams in Plasma Wakefields. Physical Review Letters, 2017, 118, 244801.	7.8	30
22	An examination of the scaling laws for LWFA in the self-guided nonlinear blowout regime. AIP Conference Proceedings, 2017, . .	0.4	1
23	High quality electron bunch generation using a longitudinal density-tailored plasma-based accelerator in the three-dimensional blowout regime. Physical Review Accelerators and Beams, 2017, 20, .	1.6	53
24	9 GeV energy gain in a beam-driven plasma wakefield accelerator. Plasma Physics and Controlled Fusion, 2016, 58, 034017.	2.1	35
25	Physics of Phase Space Matching for Staging Plasma and Traditional Accelerator Components Using Longitudinally Tailored Plasma Profiles. Physical Review Letters, 2016, 116, 124801.	7.8	73
26	Demonstration of a positron beam-driven hollow channel plasma wakefield accelerator. Nature Communications, 2016, 7, 11785.	12.8	93
27	High-field plasma acceleration in a high-ionization-potential gas. Nature Communications, 2016, 7, 11898.	12.8	18
28	Self-mapping the longitudinal field structure of a nonlinear plasma accelerator cavity. Nature Communications, 2016, 7, 12483.	12.8	18
29	Long-range attraction of an ultrarelativistic electron beam by a column of neutral plasma. New Journal of Physics, 2016, 18, 103013.	2.9	5
30	Enabling Lorentz boosted frame particle-in-cell simulations of laser wakefield acceleration in quasi-3D geometry. Journal of Computational Physics, 2016, 316, 747-759.	3.8	8
31	Transverse oscillations in plasma wakefield experiments at FACET. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 94-98.	1.6	4
32	Multi-gigaelectronvolt acceleration of positrons in a self-loaded plasma wakefield. Nature, 2015, 524, 442-445.	27.8	133
33	Implementation of a hybrid particle code with a PIC description in $r\theta z$ and a gridless description in $\vec{r}$ into OSIRIS. Journal of Computational Physics, 2015, 281, 1063-1077.	3.8	49
34	Phase-Space Dynamics of Ionization Injection in Plasma-Based Accelerators. Physical Review Letters, 2014, 112, 035003.	7.8	49
35	Beam Loading by Distributed Injection of Electrons in a Plasma Wakefield Accelerator. Physical Review Letters, 2014, 112, 025001.	7.8	25
36	High-efficiency acceleration of an electron beam in a plasma wakefield accelerator. Nature, 2014, 515, 92-95.	27.8	403

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37	Modeling of laser wakefield acceleration in Lorentz boosted frame using EM-PIC code with spectral solver. Journal of Computational Physics, 2014, 266, 124-138.	3.8	23
38	An improved iteration loop for the three dimensional quasi-static particle-in-cell algorithm: QuickPIC. Journal of Computational Physics, 2013, 250, 165-177.	3.8	50
39	Strategies for mitigating the ionization-induced beam head erosion problem in an electron-beam-driven plasma wakefield accelerator. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	17
40	Coherent transition radiation from a self-modulated charged particle beam. , 2013, , .		0
41	Some observations on trapping in nonlinear multi-dimensional wakes. AIP Conference Proceedings, 2013, , .	0.4	4
42	Plasma wakefield acceleration experiments at FACET. New Journal of Physics, 2010, 12, 055030.	2.9	103