Warren B Mori

List of Publications by Year
in descending order

152 papers	12,215 citations	36303 51 h-index	24982 109 g-index
153 all docs	153 docs citations	153 times ranked	3181 citing authors

#	Article	IF	Citations
1	Monoenergetic beams of relativistic electrons from intense laserâ€“plasma interactions. Nature, 2004, 431, 535-538.	27.8	1,731
2	Generating multi-GeV electron bunches using single stage laser wakefield acceleration in a 3D nonlinear regime. Physical Review Special Topics: Accelerators and Beams, 2007, 10, .	1.8	710
3	Energy doubling of 42â€‰GeV electrons in a metre-scale plasma wakefield accelerator. Nature, 2007, 445, 741-744.	27.8	604
4	Injection and Trapping of Tunnel-Ionized Electrons into Laser-Produced Wakes. Physical Review Letters, 2010, 104, 025003.	7.8	434
5	Proton Shock Acceleration in Laser-Plasma Interactions. Physical Review Letters, 2004, 92, 015002.	7.8	431
6	Nonlinear Theory for Relativistic Plasma Wakefields in the Blowout Regime. Physical Review Letters, 2006, 96, 165002.	7.8	419
7	OSIRIS: A Three-Dimensional, Fully Relativistic Particle in Cell Code for Modeling Plasma Based Accelerators. Lecture Notes in Computer Science, 2002, , 342-351.	1.3	413
8	High-efficiency acceleration of an electron beam in a plasma wakefield accelerator. Nature, 2014, 515, 92-95.	27.8	403
9	Self-Guided Laser Wakefield Acceleration beyond 1ÂGeV Using Ionization-Induced Injection. Physical Review Letters, 2010, 105, 105003.	7.8	338
10	Photon accelerator. Physical Review Letters, 1989, 62, 2600-2603.	7.8	272
11	Ultrahigh gradient particle acceleration by intense laser-driven plasma density waves. Nature, 1984, 311, 525-529.	27.8	256
12	Beam Loading in the Nonlinear Regime of Plasma-Based Acceleration. Physical Review Letters, 2008, 101, 145002.	7.8	228
13	A nonlinear theory for multidimensional relativistic plasma wave wakefields. Physics of Plasmas, 2006, 13, 056709.	1.9	225
14	Raman forward scattering of short-pulse high-intensity lasers. Physical Review Letters, 1994, 72, 1482-1485.	7.8	223
15	On the role of the purely transverse Weibel instability in fast ignitor scenarios. Physics of Plasmas, 2002, 9, 2458-2461.	1.9	219
16	The evolution of ultraâ€intense, shortâ€pulse lasers in underdense plasmas. Physics of Plasmas, 1996, 3, 2047-2056.	1.9	186
17	One-to-one direct modeling of experiments and astrophysical scenarios: pushing the envelope on kinetic plasma simulations. Plasma Physics and Controlled Fusion, 2008, 50, 124034.	2.1	180
18	Near-GeV-Energy Laser-Wakefield Acceleration of Self-Injected Electrons in a Centimeter-Scale Plasma Channel. Physical Review Letters, 2004, 93, 185002.	7.8	168

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19	Propagation of Intense Subpicosecond Laser Pulses through Underdense Plasmas. Physical Review Letters, 1995, 74, 4659-4662.	7.8	166
20	Multi-GeV Energy Gain in a Plasma-Wakefield Accelerator. Physical Review Letters, 2005, 95, 054802.	7.8	160
21	Electron Acceleration in Cavitated Channels Formed by a Petawatt Laser in Low-Density Plasma. Physical Review Letters, 2005, 94, .	7.8	147
22	ION DYNAMICS AND ACCELERATION IN RELATIVISTIC SHOCKS. Astrophysical Journal, 2009, 695, L189-L193.	4.5	143
23	Ionization-Induced Electron Trapping in Ultrarelativistic Plasma Wakes. Physical Review Letters, 2007, 98, 084801.	7.8	138
24	Exploring laser-wakefield-accelerator regimes for near-term lasers using particle-in-cell simulation in Lorentz-boosted frames. Nature Physics, 2010, 6, 311-316.	16.7	134
25	Multi-gigaelectronvolt acceleration of positrons in a self-loaded plasma wakefield. Nature, 2015, 524, 442-445.	27.8	133
26	Weibel-Instability-Mediated Collisionless Shocks in the Laboratory with Ultraintense Lasers. Physical Review Letters, 2012, 108, 235004.	7.8	119
27	Three-dimensional Weibel instability in astrophysical scenarios. Physics of Plasmas, 2003, 10, 1979-1984.	1.9	115
28	X-Ray Emission from Betatron Motion in a Plasma Wiggler. Physical Review Letters, 2002, 88, 135004.	7.8	107
29	Limits of linear plasma wakefield theory for electron or positron beams. Physics of Plasmas, 2005, 12, 063101.	1.9	105
30	Laser wakeâ€field acceleration and optical guiding in a hollow plasma channel. Physics of Plasmas, 1995, 2, 310-318.	1.9	101
31	Exploiting multi-scale parallelism for large scale numerical modelling of laser wakefield accelerators. Plasma Physics and Controlled Fusion, 2013, 55, 124011.	2.1	98
32	Beam loading by electrons in nonlinear plasma wakes. Physics of Plasmas, 2009, 16, .	1.9	96
33	Demonstration of a positron beam-driven hollow channel plasma wakefield accelerator. Nature Communications, 2016, 7, 11785.	12.8	93
34	Nonlinear collisional absorption in laserâ€driven plasmas. Physics of Plasmas, 1994, 1, 4043-4049.	1.9	89
35	Group velocity of large amplitude electromagnetic waves in a plasma. Physical Review Letters, 1994, 72, 490-493.	7.8	86
36	Ion acceleration from laser-driven electrostatic shocks. Physics of Plasmas, 2013, 20, .	1.9	85

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37	Generating High-Brightness Electron Beams via Ionization Injection by Transverse Colliding Lasers in a Plasma-Wakefield Accelerator. Physical Review Letters, 2013, 111, 015003.	7.8	80
38	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
39	Saturation of Beat-Excited Plasma Waves by Electrostatic Mode Coupling. Physical Review Letters, 1986, 56, 2629-2632.	7.8	69
40	Generation of ultra-intense single-cycle laser pulses by using photon deceleration. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 29-32.	7.1	67
41	Hosing Instability in the Blow-Out Regime for Plasma-Wakefield Acceleration. Physical Review Letters, 2007, 99, 255001.	7.8	67
42	Electron Beam Characteristics from Laser-Driven Wave Breaking. Physical Review Letters, 1997, 79, 5258-5261.	7.8	64
43	Self-Guiding of Ultrashort, Relativistically Intense Laser Pulses through Underdense Plasmas in the Blowout Regime. Physical Review Letters, 2009, 102, 175003.	7.8	63
44	Plasma wakefield acceleration experiments at FACET II. Plasma Physics and Controlled Fusion, 2018, 60, 034001.	2.1	63
45	Energy doubler for a linear collider. Physical Review Special Topics: Accelerators and Beams, 2002, 5, .	1.8	60
46	Ultrarelativistic-Positron-Beam Transport through Meter-Scale Plasmas. Physical Review Letters, 2003, 90, 205002.	7.8	59
47	Relativistic single-cycle tunable infrared pulses generated from a tailored plasma density structure. Nature Photonics, 2018, 12, 489-494.	31.4	59
48	Plasma-wakefield acceleration of a positron beam. Physical Review E, 2001, 64, 045501.	2.1	58
49	E-157: A 1.4-m-long plasma wake field acceleration experiment using a 30 GeV electron beam from the Stanford Linear Accelerator Center Linac. Physics of Plasmas, 2000, 7, 2241-2248.	1.9	57
50	Role of Direct Laser Acceleration of Electrons in a Laser Wakefield Accelerator with Ionization Injection. Physical Review Letters, 2017, 118, 064801.	7.8	57
51	Numerical instability due to relativistic plasma drift in EM-PIC simulations. Computer Physics Communications, 2013, 184, 2503-2514.	7.5	53
52	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
53	On Beat Wave Excitation of Relativistic Plasma Waves. IEEE Transactions on Plasma Science, 1987, 15, 88-106.	1.3	51
54	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

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55	Perspectives on the generation of electron beams from plasma-based accelerators and their near and long term applications. Physics of Plasmas, 2020, 27, .	1.9	50
56	Phase-Space Dynamics of Ionization Injection in Plasma-Based Accelerators. Physical Review Letters, 2014, 112, 035003.	7.8	49
57	Wavebreaking of longitudinal plasma oscillations. Physica Scripta, 1990, T30, 127-133.	2.5	47
58	Low emittance electron beam generation from a laser wakefield accelerator using two laser pulses with different wavelengths. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	46
59	Femtosecond Probing of Plasma Wakefields and Observation of the Plasma Wake Reversal Using a Relativistic Electron Bunch. Physical Review Letters, 2017, 119, 064801.	7.8	44
60	Mechanism of generating fast electrons by an intense laser at a steep overdense interface. Physical Review E, 2011, 84, 025401.	2.1	42
61	Role of direct laser acceleration in energy gained by electrons in a laser wakefield accelerator with ionization injection. Plasma Physics and Controlled Fusion, 2014, 56, 084006.	2.1	42
62	Polarized beam conditioning in plasma based acceleration. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	38
63	Measurement of Transverse Wakefields Induced by a Misaligned Positron Bunch in a Hollow Channel Plasma Accelerator. Physical Review Letters, 2018, 120, 124802.	7.8	38
64	Ponderomotive force of quasiparticles in a plasma. Physical Review E, 1999, 59, 2273-2280.	2.1	37
65	Hosing Instability Suppression in Self-Modulated Plasma Wakefields. Physical Review Letters, 2014, 112, .	7.8	37
66	Simulations of Cerenkov wake radiation sources. Physics of Plasmas, 2001, 8, 4995-5005.	1.9	36
67	9 GeV energy gain in a beam-driven plasma wakefield accelerator. Plasma Physics and Controlled Fusion, 2016, 58, 034017.	2.1	35
68	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
69	Acceleration of a trailing positron bunch in a plasma wakefield accelerator. Scientific Reports, 2017, 7, 14180.	3.3	32
70	Ion Motion Induced Emittance Growth of Matched Electron Beams in Plasma Wakefields. Physical Review Letters, 2017, 118, 244801.	7.8	30
71	The relative importance of fluid and kinetic frequency shifts of an electron plasma wave. Physics of Plasmas, 2007, 14, 102104.	1.9	29
72	Plasma optical modulators for intense lasers. Nature Communications, 2016, 7, 11893.	12.8	29

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73	Positron Production by X Rays Emitted by Betatron Motion in a Plasma Wiggler. Physical Review Letters, 2006, 97, 175003.	7.8	28
74	Laser wakefield acceleration at reduced density in the self-guided regime. Physics of Plasmas, 2010, 17, 056709.	1.9	28
75	<i>InÂSitu</i> Generation of High-Energy Spin-Polarized Electrons in a Beam-Driven Plasma Wakefield Accelerator. Physical Review Letters, 2021, 126, 054801.	7.8	28
76	Self-trapped electron acceleration from the nonlinear interplay between Raman forward scattering, self-focusing, and hosing. Physics of Plasmas, 1999, 6, 2105-2116.	1.9	27
77	Physical picture for the laser hosing instability in a plasma. Physics of Plasmas, 2001, 8, 3118-3119.	1.9	27
78	Elimination of the numerical Cerenkov instability for spectral EM-PIC codes. Computer Physics Communications, 2015, 192, 32-47.	7.5	27
79	On the mutual interaction between laser beams in plasmas. Physics of Plasmas, 2002, 9, 2354-2363.	1.9	26
80	Beam Loading by Distributed Injection of Electrons in a Plasma Wakefield Accelerator. Physical Review Letters, 2014, 112, 025001.	7.8	25
81	Bright <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow></mml:math> rays source and nonlinear Breit-Wheeler pairs in the collision of high density particle beams. Physical Review Accelerators and Beams, 2019, 22, .	1.6	24
82	A simulation study of fast ignition with ultrahigh intensity lasers. Physics of Plasmas, 2009, 16, .	1.9	23
83	Electrostatic Mode Coupling of Beat-Excited Electron Plasma Waves. IEEE Transactions on Plasma Science, 1987, 15, 107-130.	1.3	22
84	Studies of relativistic waveâ€"particle interactions in plasma-based collective accelerators. Laser and Particle Beams, 1990, 8, 427-449.	1.0	22
85	High Efficiency Uniform Wakefield Acceleration of a Positron Beam Using Stable Asymmetric Mode in a Hollow Channel Plasma. Physical Review Letters, 2021, 127, 174801.	7.8	22
86	Nonlinear and three-dimensional theory for cross-magnetic field propagation of short-pulse lasers in underdense plasmas. Physics of Plasmas, 2004, 11, 1978-1986.	1.9	21
87	Ion motion in the wake driven by long particle bunches in plasmas. Physics of Plasmas, 2014, 21, 056705.	1.9	21
88	Mitigation of numerical Cerenkov radiation and instability using a hybrid finite difference-FFT Maxwell solver and a local charge conserving current deposit. Computer Physics Communications, 2015, 197, 144-152.	7.5	21
89	Ultrafast optical fieldâ€"ionized gasesâ€"A laboratory platform for studying kinetic plasma instabilities. Science Advances, 2019, 5, eaax4545.	10.3	21
90	Nanoscale Electron Bunching in Laser-Triggered Ionization Injection in Plasma Accelerators. Physical Review Letters, 2016, 117, 034801.	7.8	20

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91	Three-dimensional particle-in-cell simulations of laser channeling in fast ignition. Physics of Plasmas, 2011, 18, 042703.	1.9	19
92	High-field plasma acceleration in a high-ionization-potential gas. Nature Communications, 2016, 7, 11898.	12.8	18
93	Self-mapping the longitudinal field structure of a nonlinear plasma accelerator cavity. Nature Communications, 2016, 7, 12483.	12.8	18
94	Measurements of the Growth and Saturation of Electron Weibel Instability in Optical-Field Ionized Plasmas. Physical Review Letters, 2020, 125, 255001.	7.8	18
95	A multi-dimensional Vlasov-Fokker-Planck code for arbitrarily anisotropic high-energy-density plasmas. Physics of Plasmas, 2013, 20, 056303.	1.9	17
96	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
97	Formation of Ultrarelativistic Electron Rings from a Laser-Wakefield Accelerator. Physical Review Letters, 2015, 115, 055004.	7.8	17
98	High-resolution phase-contrast imaging of biological specimens using a stable betatron X-ray source in the multiple-exposure mode. Scientific Reports, 2019, 9, 7796.	3.3	16
99	Longitudinal Ion Acceleration From High-Intensity Laser Interactions With Underdense Plasma. IEEE Transactions on Plasma Science, 2008, 36, 1825-1832.	1.3	15
100	Controlled ionization-induced injection by tailoring the gas-density profile in laser wakefield acceleration. Journal of Plasma Physics, 2012, 78, 363-371.	2.1	15
101	On numerical errors to the fields surrounding a relativistically moving particle in PIC codes. Journal of Computational Physics, 2020, 413, 109451.	3.8	14
102	A new field solver for modeling of relativistic particle-laser interactions using the particle-in-cell algorithm. Computer Physics Communications, 2021, 258, 107580.	7.5	14
103	Dynamic load balancing with enhanced shared-memory parallelism for particle-in-cell codes. Computer Physics Communications, 2021, 259, 107633.	7.5	14
104	Accurately simulating nine-dimensional phase space of relativistic particles in strong fields. Journal of Computational Physics, 2021, 438, 110367.	3.8	13
105	Emittance preservation through density ramp matching sections in a plasma wakefield accelerator. Physical Review Accelerators and Beams, 2020, 23, .	1.6	13
106	Enhanced stopping of macro-particles in particle-in-cell simulations. Physics of Plasmas, 2014, 21, .	1.9	12
107	A multi-sheath model for highly nonlinear plasma wakefields. Physics of Plasmas, 2021, 28, .	1.9	12
108	Laser Hosing in Relativistically Hot Plasmas. Physical Review Letters, 2013, 110, 155002.	7.8	11

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109	Generation of ultrahigh-brightness pre-bunched beams from a plasma cathode for X-ray free-electron lasers. Nature Communications, 2022, 13, .	12.8	11
110	Energy gain scaling with plasma length and density in the plasma wakefield accelerator. New Journal of Physics, 2010, 12, 045022.	2.9	10
111	A quasi-static particle-in-cell algorithm based on an azimuthal Fourier decomposition for highly efficient simulations of plasma-based acceleration: QPAD. Computer Physics Communications, 2021, 261, 107784.	7.5	10
112	Generating high quality ultrarelativistic electron beams using an evolving electron beam driver. Physical Review Accelerators and Beams, 2020, 23, .	1.6	10
113	Upper limit power for self-guided propagation of intense lasers in plasma. Applied Physics Letters, 2012, 101, .	3.3	9
114	Simulations of efficient laser wakefield accelerators from 1 to 100GeV. Journal of Plasma Physics, 2012, 78, 401-412.	2.1	8
115	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
116	Ultra-short pulse generation from mid-IR to THz range using plasma wakes and relativistic ionization fronts. Physics of Plasmas, 2021, 28, .	1.9	8
117	Ultrabright Electron Bunch Injection in a Plasma Wakefield Driven by a Superluminal Flying Focus Electron Beam. Physical Review Letters, 2022, 128, 174803.	7.8	8
118	Transformer ratio and pulse shaping in laser wakefield accelerator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 410, 488-492.	1.6	7
119	Hot-electron generation from laserâ€“pre-plasma interactions in cone-guided fast ignition. Physics of Plasmas, 2013, 20, .	1.9	7
120	Numerical heating in particle-in-cell simulations with Monte Carlo binary collisions. Physical Review E, 2021, 103, 013306.	2.1	7
121	CO₂ Laser acceleration of forward directed MeV proton beams in a gas target at critical plasma density. Journal of Plasma Physics, 2012, 78, 373-382.	2.1	6
122	Two-stage acceleration of protons from relativistic laser-solid interaction. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	6
123	Recent Advances and Some Results in Plasma-Based Accelerator Modeling. AIP Conference Proceedings, 2002, , .	0.4	5
124	Acceleration of injected electrons by the plasma beat wave accelerator. AIP Conference Proceedings, 1992, , .	0.4	4
125	Some observations on trapping in nonlinear multi-dimensional wakes. AIP Conference Proceedings, 2013, , .	0.4	4
126	Generation of Terawatt Attosecond Pulses from Relativistic Transition Radiation. Physical Review Letters, 2021, 126, 094801.	7.8	4

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127	Laser acceleration. AIP Conference Proceedings, 1995, , .	0.4	3
128	Stable laser-produced quasimonoenergetic proton beams from interactive laser and target shaping. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	3
129	Electron Weibel instability induced magnetic fields in optical-field ionized plasmas. Physics of Plasmas, 2022, 29, .	1.9	3
130	Advanced accelerator simulation research: miniaturizing accelerators from kilometers to meters. Journal of Physics: Conference Series, 2005, 16, 184-194.	0.4	2
131	Electron acceleration at oblique angles via stimulated Raman scattering at laser irradiance <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>></mml:mo><mml:msup><mml:mn>10</mml:mn> width="0.16em" /><mml:mi mathvariant="normal">W</mml:mi><mml:mspace width="0.16em" /><mml:msup><mml:mrow><mml:mi>cm</mml:mi></mml:mrow><mml:mrow><mml:mo>âˆ’</mml:mo><mml:mn>2</mml:mn></mml: mathvariant. Physical Review E, 2021, 103, 033203.	2.1	2
132	Extended particle absorber for efficient modeling of intense laserâ€“solid interactions. Physics of Plasmas, 2021, 28, 112702.	1.9	2
133	High-Energy Electron Beam Generation by a Laser Pulse Propagating in a Plasma. AIP Conference Proceedings, 2002, , .	0.4	1
134	SHEET CROSSING AND WAVE BREAKING IN THE LASER WAKEFIELD ACCELERATOR. International Journal of Modern Physics B, 2007, 21, 439-446.	2.0	1
135	Studies of Zonal Flows Driven by Drift Mode Turbulence in Laboratory and Space Plasmas. , 2008, , .		1
136	Modeling of laser wakefield acceleration in the Lorentz boosted frame using OSIRIS and UPIC framework. , 2013, , .		1
137	Mitigation Techniques for Witness Beam Hosing in Plasma - Based Acceleration. , 2018, , .		1
138	Generation of topologically complex three-dimensional electron beams in a plasma photocathode. Physical Review Accelerators and Beams, 2022, 25, .	1.6	1
139	Highly spin-polarized multi-GeV electron beams generated by single-species plasma photocathodes. Physical Review Research, 2022, 4, .	3.6	1
140	Observation of mono-energetic structures in the spectrum of laser wakefield accelerated electrons. AIP Conference Proceedings, 2004, , .	0.4	0
141	The effect of laser focusing conditions in laser wakefield acceleration experiments. , 2006, , .		0
142	PLASMA WAKES DRIVEN BY NEUTRINOS, PHOTONS AND ELECTRON BEAMS. International Journal of Modern Physics B, 2007, 21, 343-350.	2.0	0
143	Summary Report of Working Group 2: Computation. , 2010, , .		0
144	Kinetics of Particles in Relativistic Collisionless Shocks. Geophysical Monograph Series, 0, , 65-70.	0.1	0

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145	3D simulations of pre-ionized and two-stage ionization injected laser wakefield accelerators. , 2013, , .		0
146	Coherent transition radiation from a self-modulated charged particle beam. , 2013, , .		0
147	Attosecond electron sheets and attosecond light pulses from relativistic laser wakefields in underdense plasmas. AIP Conference Proceedings, 2016, , .	0.4	0
148	Modeling of laser wakefield acceleration in Lorentz boosted frame using a Quasi-3D OSIRIS algorithm. AIP Conference Proceedings, 2016, , .	0.4	0
149	Investigating Instabilities of Long, Intense Laser Pulses in Plasma Wakefield Accelerators. , 2018, , .		0
150	Reduced fast electron transport in shock-heated plasma in multilayer targets due to self-generated magnetic fields. Physical Review E, 2018, 98, .	2.1	0
151	Stopping-power enhancement from discrete particle-wake correlations in high-energy-density plasmas. Physical Review E, 2021, 104, 035203.	2.1	0
152	The optimal beam-loading in two-bunch nonlinear plasma wakefield accelerators. Plasma Physics and Controlled Fusion, 2022, 64, 065007.	2.1	0