C Joshi

List of Publications by Year
in descending order

131 papers	9,448 citations	36303 51 h-index	38395 95 g-index
133 all docs	133 docs citations	133 times ranked	2478 citing authors

#	Article	IF	Citations
1	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
2	Predominant contribution of direct laser acceleration to high-energy electron spectra in a low-density self-modulated laser wakefield accelerator. Physical Review Accelerators and Beams, 2021, 24, .	1.6	6
3	Microcoulomb (0.7 Â± $$rac{0.4}{0.2}$$ Î¼C) laser plasma accelerator on OMEGA EP. Scientific Reports, 2021, 11, 7498.	3.3	17
4	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
5	Initializing anisotropic electron velocity distribution functions in optical-field ionized plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 024011.	2.1	6
6	EuPRAXIA Conceptual Design Report. European Physical Journal: Special Topics, 2020, 229, 3675-4284.	2.6	64
7	Outlook for the Future. , 2020, , 797-825.		0
8	Betatron x-ray radiation in the self-modulated laser wakefield acceleration regime: prospects for a novel probe at large scale laser facilities. Nuclear Fusion, 2019, 59, 032003.	3.5	17
9	Plasma-based accelerators: then and now. Plasma Physics and Controlled Fusion, 2019, 61, 104001.	2.1	6
10	Producing multi-coloured bunches through beam-induced ionization injection in plasma wakefield accelerator. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180184.	3.4	4
11	Betatron radiation and emittance growth in plasma wakefield accelerators. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180173.	3.4	4
12	X-ray sources using a picosecond laser driven plasma accelerator. Physics of Plasmas, 2019, 26, .	1.9	22
13	Phase Space Dynamics of a Plasma Wakefield Dechirper for Energy Spread Reduction. Physical Review Letters, 2019, 122, 204804.	7.8	31
14	X-ray analysis methods for sources from self-modulated laser wakefield acceleration driven by picosecond lasers. Review of Scientific Instruments, 2019, 90, 033503.	1.3	8
15	Near-Ideal Dechirper for Plasma-Based Electron and Positron Acceleration Using a Hollow Channel Plasma. Physical Review Applied, 2019, 12, .	3.8	10
16	Laser-ionized, beam-driven, underdense, passive thin plasma lens. Physical Review Accelerators and Beams, 2019, 22, .	1.6	26
17	Effect of fluctuations in the down ramp plasma source profile on the emittance and current profile of the self-injected beam in a plasma wakefield accelerator. Physical Review Accelerators and Beams, 2019, 22, .	1.6	10
18	Bremsstrahlung hard x-ray source driven by an electron beam from a self-modulated laser wakefield accelerator. Plasma Physics and Controlled Fusion, 2018, 60, 054008.	2.1	31

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19	Plasma wakefield acceleration experiments at FACET II. Plasma Physics and Controlled Fusion, 2018, 60, 034001.	2.1	63
20	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
21	Probing plasma wakefields using electron bunches generated from a laser wakefield accelerator. Plasma Physics and Controlled Fusion, 2018, 60, 044013.	2.1	6
22	Mitigation Techniques for Witness Beam Hosing in Plasma - Based Acceleration. , 2018, , .		1
23	Betatron x-ray radiation from laser-plasma accelerators driven by femtosecond and picosecond laser systems. Physics of Plasmas, 2018, 25, 056706.	1.9	10
24	Role of Direct Laser Acceleration of Electrons in a Laser Wakefield Accelerator with Ionization Injection. Physical Review Letters, 2017, 118, 064801.	7.8	57
25	Observation of Betatron X-Ray Radiation in a Self-Modulated Laser Wakefield Accelerator Driven with Picosecond Laser Pulses. Physical Review Letters, 2017, 118, 134801.	7.8	45
26	Horizon 2020 EuPRAXIA design study. Journal of Physics: Conference Series, 2017, 874, 012029.	0.4	60
27	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
28	Acceleration of a trailing positron bunch in a plasma wakefield accelerator. Scientific Reports, 2017, 7, 14180.	3.3	32
29	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
30	9 GeV energy gain in a beam-driven plasma wakefield accelerator. Plasma Physics and Controlled Fusion, 2016, 58, 034017.	2.1	35
31	Self-modulated laser wakefield accelerators as x-ray sources. Plasma Physics and Controlled Fusion, 2016, 58, 034018.	2.1	37
32	Evidence for high-energy and low-emittance electron beams using ionization injection of charge in a plasma wakefield accelerator. Plasma Physics and Controlled Fusion, 2016, 58, 034009.	2.1	12
33	Estimation of direct laser acceleration in laser wakefield accelerators using particle-in-cell simulations. Plasma Physics and Controlled Fusion, 2016, 58, 034008.	2.1	20
34	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
35	Nanoscale Electron Bunching in Laser-Triggered Ionization Injection in Plasma Accelerators. Physical Review Letters, 2016, 117, 034801.	7.8	20
36	Colliding ionization injection in a plasma wakefield accelerator. Plasma Physics and Controlled Fusion, 2016, 58, 034015.	2.1	6

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37	High-field plasma acceleration in a high-ionization-potential gas. Nature Communications, 2016, 7, 11898.	12.8	18
38	Capturing relativistic wakefield structures in plasmas using ultrashort high-energy electrons as a probe. Scientific Reports, 2016, 6, 29485.	3.3	26
39	Self-mapping the longitudinal field structure of a nonlinear plasma accelerator cavity. Nature Communications, 2016, 7, 12483.	12.8	18
40	The energy-dependent betatron phase advance in the blowout regimeâ€“comparison of two methods for estimation. AIP Conference Proceedings, 2016, , .	0.4	0
41	Sub-femtosecond electron bunches created by direct laser acceleration in a laser wakefield accelerator with ionization injection. AIP Conference Proceedings, 2016, , .	0.4	1
42	Long-range attraction of an ultrarelativistic electron beam by a column of neutral plasma. New Journal of Physics, 2016, 18, 103013.	2.9	5
43	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
44	Low-energy-spread laser wakefield acceleration using ionization injection with a tightly focused laser in a mismatched plasma channel. Plasma Physics and Controlled Fusion, 2016, 58, 034004.	2.1	7
45	Limitation on the accelerating gradient of a wakefield excited by an ultrarelativistic electron beam in rubidium plasma. Physical Review Accelerators and Beams, 2016, 19, .	1.6	3
46	Betatron radiation from laser plasma accelerators. Proceedings of SPIE, 2015, , .	0.8	1
47	Formation of Ultrarelativistic Electron Rings from a Laser-Wakefield Accelerator. Physical Review Letters, 2015, 115, 055004.	7.8	17
48	Multi-gigaelectronvolt acceleration of positrons in a self-loaded plasma wakefield. Nature, 2015, 524, 442-445.	27.8	133
49	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
50	Measuring the angular dependence of betatron x-ray spectra in a laser-wakefield accelerator. Plasma Physics and Controlled Fusion, 2014, 56, 084016.	2.1	5
51	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
52	Phase-Space Dynamics of Ionization Injection in Plasma-Based Accelerators. Physical Review Letters, 2014, 112, 035003.	7.8	49
53	High-efficiency acceleration of an electron beam in a plasma wakefield accelerator. Nature, 2014, 515, 92-95.	27.8	403
54	Laser wakefield accelerator based light sources: potential applications and requirements. Plasma Physics and Controlled Fusion, 2014, 56, 084015.	2.1	69

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55	Laser ionized preformed plasma at FACET. Plasma Physics and Controlled Fusion, 2014, 56, 084011.	2.1	28
56	Angular Dependence of Betatron X-Ray Spectra from a Laser-Wakefield Accelerator. Physical Review Letters, 2013, 111, 235004.	7.8	60
57	Ion acceleration from laser-driven electrostatic shocks. Physics of Plasmas, 2013, 20, .	1.9	85
58	12.1 Plasma Accelerators. , 2013, , 592-605.		3
59	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
60	Forward directed ion acceleration in a LWFA with ionization-induced injection. Journal of Plasma Physics, 2012, 78, 327-331.	2.1	7
61	Demonstration of a Narrow Energy Spread,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo>â^¼</mml:mo><mml:mn>0.5</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext Beam from a Two-Stage Laser Wakefield Accelerator. Physical Review Letters, 2011, 107, 045001.	7.8	213
62	High-brilliance synchrotron radiation induced by the plasma magnetostatic mode. Physical Review Special Topics: Accelerators and Beams, 2010, 13, .	1.8	7
63	Laser wakefield acceleration at reduced density in the self-guided regime. Physics of Plasmas, 2010, 17, 056709.	1.9	28
64	Self-Guided Laser Wakefield Acceleration beyond 1ÂGeV Using Ionization-Induced Injection. Physical Review Letters, 2010, 105, 105003.	7.8	338
65	Injection and Trapping of Tunnel-Ionized Electrons into Laser-Produced Wakes. Physical Review Letters, 2010, 104, 025003.	7.8	434
66	Measurements of the Critical Power for Self-Injection of Electrons in a Laser Wakefield Accelerator. Physical Review Letters, 2009, 103, 215006.	7.8	128
67	Self-Guiding of Ultrashort, Relativistically Intense Laser Pulses through Underdense Plasmas in the Blowout Regime. Physical Review Letters, 2009, 102, 175003.	7.8	63
68	Pump depletion limited evolution of the relativistic plasma wave-front in a forced laser-wakefield accelerator. Plasma Physics and Controlled Fusion, 2009, 51, 024003.	2.1	5
69	The development of laser- and beam-driven plasma accelerators as an experimental field. Physics of Plasmas, 2007, 14, 055501.	1.9	111
70	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
71	Ionization-Induced Electron Trapping in Ultrarelativistic Plasma Wakes. Physical Review Letters, 2007, 98, 084801.	7.8	138
72	Simulation of monoenergetic electron generation via laser wakefield accelerators for 5â€“25TW lasers. Physics of Plasmas, 2006, 13, 056708.	1.9	83

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73	Multi-GeV Energy Gain in a Plasma-Wakefield Accelerator. Physical Review Letters, 2005, 95, 054802.	7.8	160
74	Experiments on laser driven beatwave acceleration in a ponderomotively formed plasma channel. Physics of Plasmas, 2004, 11, 2875-2881.	1.9	30
75	Enhanced Acceleration of Injected Electrons in a Laser-Beat-Wave-Induced Plasma Channel. Physical Review Letters, 2004, 92, 095004.	7.8	56
76	Nonresonant beat-wave excitation of relativistic plasma waves with constant phase velocity for charged-particle acceleration. Physical Review E, 2004, 69, 026404.	2.1	30
77	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
78	Meter-Scale Plasma-Wakefield Accelerator Driven by a Matched Electron Beam. Physical Review Letters, 2004, 93, .	7.8	88
79	Self-modulated wakefield and forced laser wakefield acceleration of electrons. Physics of Plasmas, 2003, 10, 2071-2077.	1.9	46
80	Plasma-Wakefield Acceleration of an Intense Positron Beam. Physical Review Letters, 2003, 90, 214801.	7.8	102
81	The production of high-energy electrons from the interaction of an intense laser pulse with an underdense plasma. Journal of Modern Optics, 2003, 50, 673-681.	1.3	1
82	Dynamic focusing of an electron beam through a long plasma. Physical Review Special Topics: Accelerators and Beams, 2002, 5, .	1.8	13
83	Transverse Envelope Dynamics of a 28.5-GeV Electron Beam in a Long Plasma. Physical Review Letters, 2002, 88, 154801.	7.8	81
84	Efficient shortening of self-chirped picosecond pulses in a high-power CO_2 amplifier. Optics Letters, 2001, 26, 813.	3.3	24
85	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
86	Alternative interpretation of Nucl. Instr. and Meth. A 410 (1998) 357 (H. Dewa et al.). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 432, 227-231.	1.6	3
87	Observation of resonant energy transfer between identical-frequency laser beams. Physics of Plasmas, 1999, 6, 2144-2149.	1.9	20
88	Photo-ionized lithium source for plasma accelerator applications. IEEE Transactions on Plasma Science, 1999, 27, 791-799.	1.3	70
89	Observation of the Nonlinear Saturation of Langmuir Waves Driven by Ponderomotive Force in a Large Scale Plasma. Physical Review Letters, 1999, 83, 2965-2968.	7.8	23
90	Generation of 160-ps terawatt-power CO_2 laser pulses. Optics Letters, 1999, 24, 1717.	3.3	43

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91	Second generation beatwave experiments at UCLA. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 410, 378-387.	1.6	10
92	The Neptune photoinjector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 410, 437-451.	1.6	21
93	Experimental Measurements of Hot Electrons Generated by Ultraintense (>1019W/cm2) Laser-Plasma Interactions on Solid-Density Targets. Physical Review Letters, 1998, 81, 822-825.	7.8	263
94	Plasma Wave Generation in a Self-Focused Channel of a Relativistically Intense Laser Pulse. Physical Review Letters, 1998, 81, 100-103.	7.8	79
95	Observation of Electron Energies Beyond the Linear Dephasing Limit from a Laser-Excited Relativistic Plasma Wave. Physical Review Letters, 1998, 80, 2133-2136.	7.8	195
96	Second harmonic generation and its interaction with relativistic plasma waves driven by forward Raman instability in underdense plasmas. Physics of Plasmas, 1997, 4, 1127-1131.	1.9	61
97	Spatio-temporal dynamics of the resonantly excited relativistic plasma wave driven by a CO2 laser. Physics of Plasmas, 1997, 4, 1434-1447.	1.9	17
98	Radiation from Cerenkov Wakes in a Magnetized Plasma. Physical Review Letters, 1997, 79, 4194-4197.	7.8	161
99	Observation of Raman forward scattering and electron acceleration in the relativistic regime. IEEE Transactions on Plasma Science, 1996, 24, 289-295.	1.3	58
100	Electron acceleration from the breaking of relativistic plasma waves. Nature, 1995, 377, 606-608.	27.8	750
101	Propagation of Intense Subpicosecond Laser Pulses through Underdense Plasmas. Physical Review Letters, 1995, 74, 4659-4662.	7.8	166
102	Evolution of Stimulated Raman into Stimulated Compton Scattering of Laser Light via Wave Breaking of Plasma Waves. Physical Review Letters, 1995, 74, 1355-1358.	7.8	36
103	Acceleration and scattering of injected electrons in plasma beat wave accelerator experiments*. Physics of Plasmas, 1994, 1, 1753-1760.	1.9	67
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105	Ultrahigh-gradient acceleration of injected electrons by laser-excited relativistic electron plasma waves. Physical Review Letters, 1993, 70, 37-40.	7.8	307
106	Plasma physics aspects of tunnel-ionized gases. Physical Review Letters, 1992, 68, 321-324.	7.8	81
107	Strongly coupled stimulated Raman backscatter from subpicosecond laser-plasma interactions. Physical Review Letters, 1992, 69, 442-445.	7.8	86
108	Experiments and simulations of tunnel-ionized plasmas. Physical Review A, 1992, 46, 1091-1105.	2.5	164

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109	Stimulated Compton scattering from preformed underdense plasmas. Physical Review Letters, 1991, 67, 1434-1437.	7.8	29
110	Motion of relativistic electrons through transverse relativistic plasma waves. Review of Scientific Instruments, 1990, 61, 3037-3039.	1.3	5
111	Studies of relativistic waveâ€“particle interactions in plasma-based collective accelerators. Laser and Particle Beams, 1990, 8, 427-449.	1.0	22
112	The nonlinear optics of plasmas. Physica Scripta, 1990, T30, 90-94.	2.5	5
113	Demonstration of Collisionally Enhanced Degenerate Four-Wave Mixing in a Plasma. Physical Review Letters, 1989, 62, 151-154.	7.8	28
114	Nonlinear Mixing of Electromagnetic Waves in Plasmas. Science, 1989, 243, 494-500.	12.6	18
115	Evolution of self-focusing of intense electromagnetic waves in plasma. Physical Review Letters, 1988, 60, 1298-1301.	7.8	187
116	Observation of steepening in electron plasma waves driven by stimulated Raman backscattering. Physical Review Letters, 1987, 59, 292-295.	7.8	38
117	Plasma wave wigglers for free-electron lasers. IEEE Journal of Quantum Electronics, 1987, 23, 1571-1577.	1.9	98
118	Backward Compton scattering for probing electric fields in a plasma. Review of Scientific Instruments, 1986, 57, 1840-1842.	1.3	2
119	Saturation of Beat-Excited Plasma Waves by Electrostatic Mode Coupling. Physical Review Letters, 1986, 56, 2629-2632.	7.8	69
120	Two Dimensional Simulations of Intense Laser Irradiation of Underdense Plasmas. , 1986, , 767-779.		2
121	Claytonet al.Respond. Physical Review Letters, 1985, 55, 1652-1652.	7.8	15
122	Laser Accelerators. IEEE Transactions on Nuclear Science, 1985, 32, 1576-1581.	2.0	11
123	Two-Dimensional Simulations of Single-Frequency and Beat-Wave Laser-Plasma Heating. Physical Review Letters, 1985, 54, 558-561.	7.8	147
124	Relativistic Plasma-Wave Excitation by Collinear Optical Mixing. Physical Review Letters, 1985, 54, 2343-2346.	7.8	192
125	Novel small-angle collective Thomson scattering system. Applied Optics, 1985, 24, 2823.	2.1	20
126	Ultrahigh gradient particle acceleration by intense laser-driven plasma density waves. Nature, 1984, 311, 525-529.	27.8	256

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127	Stimulated Raman scattering, two-plasmon decay, and hot electron generation from underdense plasmas at 0.35 Î¼m. Physics of Fluids, 1984, 27, 1887.	1.4	104
128	High Frequency Instabilities in Underdense Plasmas Produced by a 0.35 Âµm Laser Beam. , 1984, , 527-543.		3
129	Energy deposition by hot electrons in CO2-laser-irradiated targets. Physical Review A, 1982, 25, 2440-2443.	2.5	21
130	Forward Raman Instability and Electron Acceleration. Physical Review Letters, 1981, 47, 1285-1288.	7.8	171
131	Hot Electron Generation by the Two-Plasmon Decay Instability in the Laser-Plasma Interaction at 10.6 Î¼m. Physical Review Letters, 1980, 45, 1179-1182.	7.8	103