

Kei Nakamura

List of Publications by Year in descending order

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78
papers

10,416
citations

279778

23
h-index

161844

54
g-index

79
all docs

79
docs citations

79
times ranked

13026
citing authors

#	ARTICLE	IF	CITATIONS
1	Review of Particle Physics. Physical Review D, 2018, 98, .	4.7	5,390
2	GeV electron beams from a centimetre-scale accelerator. Nature Physics, 2006, 2, 696-699.	16.7	1,521
3	Multi-GeV Electron Beams from Capillary-Discharge-Guided Subpetawatt Laser Pulses in the Self-Trapping Regime. Physical Review Letters, 2014, 113, 245002.	7.8	767
4	Petawatt Laser Guiding and Electron Beam Acceleration to 8ÅGeV in a Laser-Heated Capillary Discharge Waveguide. Physical Review Letters, 2019, 122, 084801.	7.8	557
5	Plasma-Density-Gradient Injection of Low Absolute-Momentum-Spread Electron Bunches. Physical Review Letters, 2008, 100, 215004.	7.8	315
6	Tunable laser plasma accelerator based on longitudinal density tailoring. Nature Physics, 2011, 7, 862-866.	16.7	291
7	Multistage coupling of independent laser-plasma accelerators. Nature, 2016, 530, 190-193.	27.8	250
8	Low-Emittance Electron Bunches from a Laser-Plasma Accelerator Measured using Single-Shot X-Ray Spectroscopy. Physical Review Letters, 2012, 109, 064802.	7.8	155
9	Active Plasma Lensing for Relativistic Laser-Plasma-Accelerated Electron Beams. Physical Review Letters, 2015, 115, 184802.	7.8	147
10	GeV electron beams from a centimeter-scale channel guided laser wakefield accelerator. Physics of Plasmas, 2007, 14, 056708.	1.9	118
11	Diagnostics, Control and Performance Parameters for the BELLA High Repetition Rate Petawatt Class Laser. IEEE Journal of Quantum Electronics, 2017, 53, 1-21.	1.9	90
12	Effect of a laser prepulse on a narrow-cone ejection of MeV electrons from a gas jet irradiated by an ultrashort laser pulse. Physical Review E, 2003, 67, 036407.	2.1	75
13	Compact quasi-monoenergetic photon sources from laser-plasma accelerators for nuclear detection and characterization. Nuclear Instruments & Methods in Physics Research B, 2015, 350, 116-121.	1.4	56
14	Measured Emittance Dependence on the Injection Method in Laser Plasma Accelerators. Physical Review Letters, 2017, 119, 104801.	7.8	46
15	Control of tunable, monoenergetic laser-plasma-accelerated electron beams using a shock-induced density downramp injector. Physical Review Accelerators and Beams, 2017, 20, .	1.6	42
16	Spatio-temporal structure of a petawatt femtosecond laser beam. JPhys Photonics, 2019, 1, 035001.	4.6	39
17	Broadband single-shot electron spectrometer for GeV-class laser-plasma-based accelerators. Review of Scientific Instruments, 2008, 79, 053301.	1.3	37
18	Generation and pointing stabilization of multi-GeV electron beams from a laser plasma accelerator	1.9	36

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19	Refraction effects on the cavity formation and interaction of an intense ultra-short laser pulse with a gas jet. <i>Physics of Plasmas</i> , 2004, 11, L57-L60.	1.9	29
20	Laser red shifting based characterization of wakefield excitation in a laser-plasma accelerator. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	29
21	Fluid chemistry in the Solitaire and Dodo hydrothermal fields of the Central Indian Ridge. <i>Geofluids</i> , 2016, 16, 988-1005.	0.7	29
22	Control of quasi-monoenergetic electron beams from laser-plasma accelerators with adjustable shock density profile. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	29
23	Plasma channel diagnostic based on laser centroid oscillations. <i>Physics of Plasmas</i> , 2010, 17, 056706.	1.9	26
24	A new platform for ultra-high dose rate radiobiological research using the BELLA PW laser proton beamline. <i>Scientific Reports</i> , 2022, 12, 1484.	3.3	23
25	Staging of laser-plasma accelerators. <i>Physics of Plasmas</i> , 2016, 23, 056705.	1.9	22
26	Survey of spatio-temporal couplings throughout high-power ultrashort lasers. <i>Optics Express</i> , 2022, 30, 3262.	3.4	22
27	Electron beam charge diagnostics for laser plasma accelerators. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2011, 14, .	1.8	21
28	Laser-heated capillary discharge plasma waveguides for electron acceleration to 8 GeV. <i>Physics of Plasmas</i> , 2020, 27, 053102.	1.9	21
29	Acceleration of high charge ion beams with achromatic divergence by petawatt laser pulses. <i>Physical Review Accelerators and Beams</i> , 2020, 23, .	1.6	21
30	Demonstration of a plasma mirror based on a laminar flow water film. <i>Journal of Applied Physics</i> , 2010, 108, 044913.	2.5	20
31	Long-Range Persistence of Femtosecond Modulations on Laser-Plasma-Accelerated Electron Beams. <i>Physical Review Letters</i> , 2012, 108, 094801.	7.8	18
32	Measured bremsstrahlung photonuclear production of ⁹⁹ Mo (^{99m} Tc) with 34 MeV to 1.7 GeV electrons. <i>Applied Radiation and Isotopes</i> , 2015, 96, 122-128.	1.5	17
33	Absolute calibration of GafChromic film for very high flux laser driven ion beams. <i>Review of Scientific Instruments</i> , 2019, 90, 053301.	1.3	17
34	Computational studies and optimization of wakefield accelerators. <i>Journal of Physics: Conference Series</i> , 2008, 125, 012002.	0.4	13
35	Tape-Drive Based Plasma Mirror. , 2010, , .		13
36	GeV plasma accelerators driven in waveguides. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, B403-B410.	2.1	12

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37	A flexible, lightweight braille sheet display with plastic actuators driven by an organic field-effect transistor active matrix. , 0, , .		11
38	Laser and electron deflection from transverse asymmetries in laser-plasma accelerators. Physical Review E, 2019, 100, 063208.	2.1	10
39	Pulse front tilt steering in laser plasma accelerators. Physical Review Accelerators and Beams, 2019, 22, .	1.6	9
40	Radial density profile and stability of capillary discharge plasma waveguides of lengths up to 40 cm. High Power Laser Science and Engineering, 2021, 9, .	4.6	8
41	Pico-coulomb charge measured at BELLA to percent-level precision using a Turbo-ICT. Plasma Physics and Controlled Fusion, 2016, 58, 034010.	2.1	7
42	Mechanisms that influence the formation of high-ozone regions in the boundary layer downwind of the Asian continent in winter and spring. Journal of Geophysical Research, 2008, 113, .	3.3	6
43	A compact, high resolution energy, and emittance diagnostic for electron beams using active plasma lenses. Applied Physics Letters, 2020, 116, .	3.3	6
44	Time-resolved X-ray diffraction at NERL. Laser and Particle Beams, 2001, 19, 125-131.	1.0	5
45	Laser wakefield simulations towards development of compact particle accelerators. Journal of Physics: Conference Series, 2007, 78, 012021.	0.4	5
46	Progress on laser plasma accelerator development using transversely and longitudinally shaped plasmas. Comptes Rendus Physique, 2009, 10, 130-139.	0.9	5
47	Transition of the BELLA PW laser system towards a collaborative research facility in laser plasma science. AIP Conference Proceedings, 2017, , .	0.4	4
48	Parametric emittance measurements of electron beams produced by a laser plasma accelerator. Plasma Physics and Controlled Fusion, 2018, 60, 054015.	2.1	4
49	Emittance preserving thin film plasma mirrors for GeV scale laser plasma accelerators. Physical Review Accelerators and Beams, 2021, 24, .	1.6	4
50	Colliding Laser Pulses for Laser-Plasma Accelerator Injection Control. , 2010, , .		3
51	Beam transport and monitoring for laser plasma accelerators. , 2013, , .		2
52	Characterization of the spectral phase of an intense laser at focus via ionization blueshift. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 1978.	2.1	2
53	High energy, low energy spread electron bunches produced via colliding pulse injection. AIP Conference Proceedings, 2016, , .	0.4	2
54	Electron single bunch acceleration from laser-plasma at the University of Tokyo. , 0, , .		1

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55	Measurement and Numerical Analysis of Ultrashort Electron Bunch Using Fluctuation in Incoherent Cherenkov Radiation. Journal of Nuclear Science and Technology, 2004, 41, 7-14.	1.3	1
56	Performance of capillary discharge guided laser plasma wakefield accelerator. , 2007, , .		1
57	Diagnostics and controls for temporal structure of the BELLA laser system. AIP Conference Proceedings, 2016, , .	0.4	1
58	High-quality spatial modes for petawatt-class lasers. AIP Conference Proceedings, 2016, , .	0.4	1
59	Diagnostics and controls for spatiotemporal couplings for laser-plasma accelerator drivers. AIP Conference Proceedings, 2017, , .	0.4	1
60	Staging of independent laser plasma accelerators. AIP Conference Proceedings, 2017, , .	0.4	1
61	Staged, Guided Laser-Plasma Accelerators Towards Thomson Photon Sources and High Energy Physics. , 2015, , .		1
62	Measurement and Timing-Control Techniques of Femtosecond Electron Pulse. AIP Conference Proceedings, 2002, , .	0.4	0
63	Development of spatial filter for laser plasma cathode. Nuclear Instruments & Methods in Physics Research B, 2005, 241, 901-904.	1.4	0
64	Charge Diagnostics for Laser Plasma Accelerators. , 2010, , .		0
65	Plasma Channel Diagnostic Based on Laser Centroid Oscillations. , 2010, , .		0
66	Observation of optical transition radiation from electron beams generated by laser plasma accelerator. Chinese Physics C, 2013, 37, 027003.	3.7	0
67	Laser plasma acceleration using the PW-class BELLA laser. , 2014, , .		0
68	Multi-GeV experiments with the Petawatt class BELLA laser. , 2015, , .		0
69	Staged acceleration experiments. AIP Conference Proceedings, 2016, , .	0.4	0
70	Laser-assisted capillary discharge for enhanced guiding of tightly focused laser pulses at low densities. Proceedings of SPIE, 2017, , .	0.8	0
71	Optimization of the electron beam properties from intense laser pulses interacting with structured gas jets. Proceedings of SPIE, 2017, , .	0.8	0
72	Ionizing laser propagation and spectral phase determination. AIP Conference Proceedings, 2017, , .	0.4	0

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73	Narrow bandwidth Thomson photon source and diagnostic development using laser-plasma accelerators. AIP Conference Proceedings, 2017, , .	0.4	0
74	Non-destructive sub-picocoulomb charge measurement for laser-plasma accelerators. AIP Conference Proceedings, 2017, , .	0.4	0
75	Multi-GeV Electron Beams at the BErkeley Lab Laser Accelerator. , 2015, , .		0
76	Staging and Transport of Laser Plasma Accelerators. , 2015, , .		0
77	Staging of laser-plasma accelerators. , 2016, , .		0
78	Laser plasma acceleration using the PW-class BELLA laser. , 2016, , .		0