Kazuo A Tanaka

List of Publications by Year
in descending order

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141	4,391	136950	106344
papers	citations	32 h-index	65 g-index

141	141	141	2350
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. Nature, 2001, 412, 798-802.	27.8	873
2	Fast heating scalable to laser fusion ignition. Nature, 2002, 418, 933-934.	27.8	445
3	Calibration of imaging plate for high energy electron spectrometer. Review of Scientific Instruments, 2005, 76, 013507.	1.3	240
4	Plasma devices to guide and collimate a high density of MeV electrons. Nature, 2004, 432, 1005-1008.	27.8	170
5	The extreme light infrastructureâ€"nuclear physics (ELI-NP) facility: new horizons in physics with 10 PW ultra-intense lasers and 20 MeV brilliant gamma beams. Reports on Progress in Physics, 2018, 81, 094301.	20.1	164
6	Studies of ultra-intense laser plasma interactions for fast ignition. Physics of Plasmas, 2000, 7, 2014-2022.	1.9	115
7	Current status and highlights of the ELI-NP research program. Matter and Radiation at Extremes, 2020, 5, .	3.9	114
8	Observation of proton rear emission and possible gigagauss scale magnetic fields from ultra-intense laser illuminated plastic target. Physics of Plasmas, 2001, 8, 4138-4143.	1.9	106
9	Soft xâ€ray emission from ï‰0, 2ï‰0, and 4ï‰0laserâ€produced plasmas. Journal of Applied Physics, 1986, 59, 3050-3052.	2.5	93
10	Plasma jet formation and magnetic-field generation in the intense laser plasma under oblique incidence. Physics of Plasmas, 1999, 6, 2855-2861.	1.9	93
11	Initial cone-in-shell fast-ignition experiments on OMEGA. Physics of Plasmas, 2011, 18, .	1.9	82
12	Long-Scale Jet Formation with Specularly Reflected Light in Ultraintense Laser-Plasma Interactions. Physical Review Letters, 2000, 84, 674-677.	7.8	78
13	Enhancement of keV xâ€ray emission in laserâ€produced plasmas by a weak prepulse laser. Applied Physics Letters, 1987, 50, 720-722.	3.3	72
14	Fast ignitor research at the Institute of Laser Engineering, Osaka University. Physics of Plasmas, 2001, 8, 2268-2274.	1.9	72
15	Study of Laser-Hole Boring into Overdense Plasmas. Physical Review Letters, 1996, 77, 4906-4909.	7.8	70
16	Laser generated neutron source for neutron resonance spectroscopy. Physics of Plasmas, 2010, 17, .	1.9	67
17	Theoretical study of transition radiation from hot electrons generated in the laserâ€"solid interaction. Physics of Plasmas, 2003, 10, 2994-3003.	1.9	60
18	Multi-layered flyer accelerated by laser induced shock waves. Physics of Plasmas, 2000, 7, 676-680.	1.9	54

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19	Progress of fast ignitor studies and Petawatt laser construction at Osaka University. Physics of Plasmas, 2002, 9, 2202-2207.	1.9	54
20	Hugoniot measurement of diamond under laser shock compression up to 2TPa. Physics of Plasmas, 2006, 13, 052705.	1.9	53
21	Integrated implosion/heating studies for advanced fast ignition. Physics of Plasmas, 2004, 11, 2746-2753.	1.9	50
22	Optimum Hot Electron Production with Low-Density Foams for Laser Fusion by Fast Ignition. Physical Review Letters, 2006, 96, 255006.	7.8	50
23	Enhancement of energetic electrons and protons by cone guiding of laser light. Physical Review E, 2005, 71, 036403.	2.1	45
24	Implosion hydrodynamics of fast ignition targets. Physics of Plasmas, 2005, 12, 056312.	1.9	43
25	Dynamic fracture of tantalum under extreme tensile stress. Science Advances, 2017, 3, e1602705.	10.3	41
26	Measurements of fast electron scaling generated by petawatt laser systems. Physics of Plasmas, 2009, 16, .	1.9	40
27	On the behavior of ultraintense laser produced hot electrons in self-excited fields. Physics of Plasmas, 2007, 14, 040706.	1.9	39
28	Laser-Hole Boring into Overdense Plasmas Measured with Soft X-Ray Laser Probing. Physical Review Letters, 2000, 84, 2405-2408.	7.8	37
29	Transport study of intense-laser-produced fast electrons in solid targets with a preplasma created by a long pulse laser. Physics of Plasmas, 2010, 17, .	1.9	37
30	Cherenkov radiation generated by a beam of electrons revisited. Physics of Plasmas, 2005, 12, 093105.	1.9	35
31	Recent progress of implosion experiments with uniformityâ€improved GEKKO XII laser facility at the Institute of Laser Engineering, Osaka University. Physics of Plasmas, 1996, 3, 2077-2083.	1.9	34
32	New light in nuclear physics: The extreme light infrastructure. Europhysics Letters, 2017, 117, 28001.	2.0	34
33	Interpenetration and stagnation in colliding laser plasmas. Physics of Plasmas, 2014, 21, 013502.	1.9	33
34	Relativistic laser channeling in plasmas for fast ignition. Physical Review E, 2007, 76, 066403.	2.1	31
35	Density and temperature characterization of long-scale length, near-critical density controlled plasma produced from ultra-low density plastic foam. Scientific Reports, 2016, 6, 21495.	3.3	31
36	Broad-range neutron spectra identification in ultraintense laser interactions with carbon-deuterated plasma. Physics of Plasmas, 2005, 12, 110703.	1.9	29

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37	Generation of stable and low-divergence 10-MeV quasimonoenergetic electron bunch using argon gas jet. Physical Review Special Topics: Accelerators and Beams, 2009, 12, .	1.8	28
38	Momentum distribution of accelerated ions in ultra-intense laserâ€“plasma interactions via neutron spectroscopy. Physics of Plasmas, 2003, 10, 3712-3716.	1.9	26
39	Study of ultraintense laser propagation in overdense plasmas for fast ignition. Physics of Plasmas, 2009, 16, 056307.	1.9	25
40	Stimulated Raman back-scattering from a mm-scale inhomogeneous plasma irradiated with ultra-intense laser pulse. Physics of Plasmas, 2002, 9, 3552-3557.	1.9	23
41	Model experiment of cosmic ray acceleration due to an incoherent wakefield induced by an intense laser pulse. Physics of Plasmas, 2011, 18, 010701.	1.9	23
42	Present Status of Fast Ignition Research and Prospects of FIREX Project. Fusion Science and Technology, 2005, 47, 662-666.	1.1	22
43	Performance comparison of self-focusing with 1053- and 351-nm laser pulses. Physical Review E, 1999, 60, 3283-3288.	2.1	20
44	Evidence of anomalous resistivity for hot electron propagation through a dense fusion core in fast ignition experiments. New Journal of Physics, 2009, 11, 093031.	2.9	20
45	Ultrafast observation of lattice dynamics in laser-irradiated gold foils. Applied Physics Letters, 2017, 110, .	3.3	20
46	Characterization of preplasma produced by an ultrahigh intensity laser system. Physics of Plasmas, 2004, 11, 3721-3725.	1.9	19
47	Cryogenic deuterium target experiments with the GEKKO XII, green laser system. Physics of Plasmas, 1995, 2, 2495-2503.	1.9	18
48	Multi-imaging x-ray streak camera for ultrahigh-speed two-dimensional x-ray imaging of imploded core plasmas (invited). Review of Scientific Instruments, 2004, 75, 3921-3925.	1.3	18
49	Measurements of mass ablation rate and pressure in planar targets irradiated by 0.27â€¼m laser light. Journal of Applied Physics, 1986, 60, 3840-3844.	2.5	16
50	Fast Ignition Inertial Fusion: An Introduction and Preview. Fusion Science and Technology, 2006, 49, 249-253.	1.1	16
51	Advanced high resolution x-ray diagnostic for HEDP experiments. Scientific Reports, 2018, 8, 16407.	3.3	16
52	Reentrant cone angle dependence of the energetic electron slope temperature in high-intensity laser-plasma interactions. Physics of Plasmas, 2007, 14, 050701.	1.9	15
53	Nondestructive Sensor Using Microwaves From Laser Plasma by Subnanosecond Laser Pulses. IEEE Geoscience and Remote Sensing Letters, 2009, 6, 718-722.	3.1	15
54	Microcracks, spall and fracture in glass: A study using short pulsed laser shock waves. Journal of Applied Physics, 1998, 83, 3583-3594.	2.5	14

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55	Target normal sheath acceleration and laser wakefield acceleration particle-in-cell simulations performance on CPU & GPU architectures for high-power laser systems. Plasma Physics and Controlled Fusion, 2020, 62, 094005.	2.1	14
56	Threeâ€dimensional imaging of laser imploded targets. Journal of Applied Physics, 1990, 68, 1483-1488.	2.5	13
57	Spectrum of transition radiation from hot electrons generated in ultra-intense laser plasma interaction. Physics of Plasmas, 2002, 9, 3610-3616.	1.9	13
58	Efficient energy absorption of intense ps-laser pulse into nanowire target. Physics of Plasmas, 2016, 23, .	1.9	13
59	Long Ion Mean-Free Path and Nonequilibrium Radiation Effects on High-Aspect-Ratio Laser-Driven Implosions. Laser and Particle Beams, 1989, 7, 259-265.	1.0	12
60	Side-on measurement of hydrodynamics of laser-driven plasmas with high space- and time-resolution x-ray imaging technique. Review of Scientific Instruments, 2003, 74, 2198-2201.	1.3	12
61	Guiding and confining fast electrons by transient electric and magnetic fields with a plasma inverse cone. Physics of Plasmas, 2009, 16, .	1.9	12
62	Recent results and future prospects of laser fusion research at ILE, Osaka. European Physical Journal D, 2007, 44, 259-264.	1.3	11
63	Development of multi-channel electron spectrometer. Review of Scientific Instruments, 2010, 81, 10E535.	1.3	11
64	Correlation between laser accelerated MeV proton and electron beams using simple fluid model for target normal sheath acceleration. Physics of Plasmas, 2010, 17, 073110.	1.9	11
65	Collimated fast electron beam generation in critical density plasma. Physics of Plasmas, 2014, 21, .	1.9	11
66	Channeling of multikilojoule high-intensity laser beams in an inhomogeneous plasma. Physical Review E, 2015, 91, 051101.	2.1	10
67	Coherent X-ray beam metrology using 2D high-resolution Fresnel-diffraction analysis. Journal of Synchrotron Radiation, 2017, 24, 196-204.	2.4	10
68	Enhancement of soft xâ€ray emission using prepulses with 2Ï‰ and 4Ï‰ laser plasmas. Journal of Applied Physics, 1988, 63, 1787-1789.	2.5	9
69	Channel optimization of high-intensity laser beams in millimeter-scale plasmas. Physical Review E, 2018, 97, 043208.	2.1	9
70	Ultrafast olivine-ringwoodite transformation during shock compression. Nature Communications, 2021, 12, 4305.	12.8	9
71	Enhancement of laser-focused intensity greater than 10 times through a re-entrant cone in the petawatt regime. Optics Letters, 2020, 45, 3454.	3.3	9
72	Spectrum modulation of relativistic electrons by laser wakefield. Applied Physics Letters, 2008, 93, 081501.	3.3	8

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73	A ten-inch manipulator (TIM) based fast-electron spectrometer with multiple viewing angles (OU-ESM). Review of Scientific Instruments, 2019, 90, 063501.	1.3	8
74	Direct observation of imploded core heating via fast electrons with super-penetration scheme. Nature Communications, 2019, 10, 5614.	12.8	8
75	Analysis of propagation characteristic of Bleusteinâ€Gulyaev waves at surface imperfections. Applied Physics Letters, 1978, 32, 83-85.	3.3	7
76	Timeâ€resolved measurements of laserâ€induced shock waves in deuterated polystyrene porous targets by xâ€ray backlighting. Physics of Fluids B, 1991, 3, 735-744.	1.7	7
77	Harmonic emission with cyclotron satellite structure due to strong magnetic fields produced by ultra-intense laserâ€“plasma interaction. Physics of Plasmas, 2002, 9, 3193-3196.	1.9	7
78	Autoinjection of electrons into a wake field using a capillary with attached cone. Physics of Plasmas, 2009, 16, 123103.	1.9	7
79	Energy transport in aluminum targets irradiated by a 263â€nm laser. Applied Physics Letters, 1988, 52, 786-788.	3.3	6
80	Development of xâ€ray emission computed tomography for ICF research. Review of Scientific Instruments, 1990, 61, 2783-2785.	1.3	6
81	Cryostat to provide a solid deuterium layer in a plastic shell for the Gekko XII glass laser system. Review of Scientific Instruments, 1992, 63, 3378-3383.	1.3	6
82	Laser scattered images observed from carbon plasma stagnation and following molecular formation. Applied Physics Letters, 2014, 104, .	3.3	6
83	Integral Experiments for Fast Ignition Reserach. Fusion Science and Technology, 2006, 49, 342-357.	1.1	5
84	Measurements of high energy density electrons via observation of Cherenkov radiation. Physics of Plasmas, 2010, 17, 056306.	1.9	5
85	Measuring the strong electrostatic and magnetic fields with proton radiography for ultra-high intensity laser channeling on fast ignition. Review of Scientific Instruments, 2014, 85, 11E612.	1.3	5
86	Indirect monitoring shot-to-shot shock waves strength reproducibility during pumpâ€“probe experiments. Journal of Applied Physics, 2016, 120, .	2.5	5
87	Electron transport in a nanowire irradiated by an intense laser pulse. Physical Review Research, 2021, 3, .	3.6	5
88	Material Dependence on Plasma Shielding Induced by Laser Ablation. Plasma and Fusion Research, 2012, 7, 2405065-2405065.	0.7	5
89	Boundary driven unconventional mechanism of macroscopic magnetic field generation in beam-plasma interaction. Physical Review Research, 2020, 2, .	3.6	5
90	Efficient propagation of ultra-intense laser beam in dense plasma. Plasma Physics and Controlled Fusion, 2015, 57, 064005.	2.1	4

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91	Micro-optics for ultra-intense lasers. AIP Advances, 2021, 11, 035214.	1.3	4
92	Energetic Particle and Gamma Ray Production by Ultra-Intense Laser and Their Applications. The Review of Laser Engineering, 2001, 29, 238-242.	0.0	4
93	Stopping and transport of fast electrons in superdense matter. Physics of Plasmas, 2013, 20, 083301.	1.9	3
94	Slowdown mechanisms of ultraintense laser propagation in critical density plasma. Physical Review E, 2015, 92, 013106.	2.1	3
95	Detection system of the cryogenic target default for laser fusion experiment.. The Review of Laser Engineering, 1989, 17, 721-726.	0.0	3
96	Diodeâ€array coupled timeâ€resolved transmission grating spectrometer. Review of Scientific Instruments, 1986, 57, 2489-2492.	1.3	2
97	Energy transport experiments at Institute of Laser Engineering, Osaka University. Laser and Particle Beams, 1989, 7, 495-504.	1.0	2
98	Volume integral equation for analysis of quantum electron waveguide circuits. Electronics and Communications in Japan, 1994, 77, 12-20.	0.2	2
99	Ultraintense Lasers as a Promising Research Tool for Fusion Material Testing: Production of Ions, X-Rays and Neutrons. Plasma and Fusion Research, 2013, 8, 3404055-3404055.	0.7	2
100	Finite Ion-Relaxation and Nonequilibrium Radiation Effects on Laser-Driven Implosions. Journal of the Physical Society of Japan, 1988, 57, 2237-2240.	1.6	2
101	Zonal Proton Generation from Target Edges Using Ultra-Intense Laser Pulse. Plasma and Fusion Research, 2007, 2, 003-003.	0.7	2
102	Fast Ignitor Research with Use of Ultra-Intense Laser System.. Journal of Plasma and Fusion Research, 1999, 75, 452-458.	0.4	2
103	Effect of laser irradiation on the superconductive properties of (Y0.95Sm0.05) Ba2Cu3Ox. Physica Status Solidi A, 1989, 116, 787-792.	1.7	1
104	Beatwave excitation of plasma wave and electron acceleration. AIP Conference Proceedings, 1991, , .	0.4	1
105	New integral equations for designing dielectric waveguide bend circuits: Guidedâ€mode extracted integral equations. Electronics and Communications in Japan, 1993, 76, 1-11.	0.2	1
106	Measurement of absorption distribution by second harmonic and x-ray images. AIP Conference Proceedings, 1996, , .	0.4	1
107	Implosion experiments with uniformity-improved GEKKO XII: Overview. AIP Conference Proceedings, 1996, , .	0.4	1
108	Boundary integral equations for computer aided design of nearâ€field optics. Electronics and Communications in Japan, 1996, 79, 10-18.	0.2	1

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109	X-ray spectroscopy on energy transport and deposition in ultra-intensity laser produced plasmas. AIP Conference Proceedings, 2002, , .	0.4	1
110	Laser-Driven Equation-of-State Measurements. Journal of Plasma and Fusion Research, 2004, 80, 432-437.	0.4	1
111	Confirmation of hot electron preheat with a Cu foam sphere on GEKKO-LFEX laser facility. Physics of Plasmas, 2017, 24, 112709.	1.9	1
112	Experimental design of radiation reaction by 1 PW laser pulse and linear accelerator electron bunch. High Energy Density Physics, 2021, 38, 100919.	1.5	1
113	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. , 0, .		1
114	Characterization of GEKKO/HIPER-Driven Shock Waves for Equation-of-State Experiments in Ultra-High-Pressure Regime. Journal of Plasma and Fusion Research, 2004, 80, 486-491.	0.4	1
115	Advanced Target Design for the FIREX-I Project. Plasma and Fusion Research, 2009, 4, S1001-S1001.	0.7	1
116	Progress of Advanced Fusion Energy Studies with Ultra-Intense Lasers.. Journal of Plasma and Fusion Research, 2002, 78, 792-798.	0.4	1
117	Simultaneous Measurement of Temperature, Pressure and Shock-Wave Velocity of Compressed Polystyrene. Journal of Plasma and Fusion Research, 2004, 80, 476-481.	0.4	1
118	Influence of Electrostatic and Magnetic Fields on Hot Electron Emission in Ultra-Intense Laser Matter Interactions. Plasma and Fusion Research, 2007, 2, 015-015.	0.7	1
119	Nondestructive Sensor Using Microwaves from a Laser Plasma. Plasma and Fusion Research, 2009, 4, 003-003.	0.7	1
120	Impact Shock Experiments of Mini-Flyers Accelerated by High-Intensity Pulsed Lasers.. The Review of Laser Engineering, 1999, 27, 346-350.	0.0	1
121	Development of a Schwarzschild type X-ray microscope.. The Review of Laser Engineering, 1990, 18, 938-943.	0.0	0
122	Indirect-drive inertial fusion research at the Institute of Laser Engineering. AIP Conference Proceedings, 1994, , .	0.4	0
123	Ï”R measurement of imploded cryogenic foam target by DD-protons. AIP Conference Proceedings, 1996, , .	0.4	0
124	Study of Equation of State Using Laser-Induced Shock-Wave Compression 3. Equation-of-State Measurements by Laser-Induced Shock Compression 3.2. Equation-of-State Measurements for Inertial-Fusion Pellet Materials. Journal of Plasma and Fusion Research, 2004, 80, 442-446.	0.4	0
125	Current status of fast ignition and its prospect at Osaka University. , 2006, , .		0
126	Time-resolved imaging of ultrafast laser-driven plasmas using spectral interferometry. , 2006, , .		0

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127	Encapsulation of Low Density Materials for the First Stage of Fast Ignition Realization Experiment (FIREX-I) - Control of Microstructure and Gelation Process using a Phase-Transfer Catalyst and Tailored Polymers. , 2007, , .		0
128	Technological Challenge and Activation of High-Energy PW Laser LFEX. , 2007, , .		0
129	Spatially controlling fast electron transport relevant to fast ignition. , 2009, , .		0
130	Measurements of Nonlinear Refractive Indices for Silica Glass Using Z-Scan Method. The Review of Laser Engineering, 2011, 39, 927-930.	0.0	0
131	Temperature dependence of laser-induced damage thresholds for dielectric and metal coatings. , 2011, , .		0
132	Collimation of Fast Electrons in Critical Density Plasma Channel. Plasma and Fusion Research, 2015, 10, 1304005-1304005.	0.7	0
133	Microwave Propagation via Laser Plasma Channels. Plasma and Fusion Research, 2007, 2, 012-012.	0.7	0
134	High Intensity Laser Propagation though Overdense Plasmas. The Review of Laser Engineering, 2008, 36, 1139-1141.	0.0	0
135	Plasma Devices to Control Energetic Electrons Produced by Ultra-intense Lasers. The Review of Laser Engineering, 2008, 36, 1146-1149.	0.0	0
136	Characteristic of Relativistic Plasma Created by Ultra Intense Laser. The Review of Laser Engineering, 2013, 41, 7.	0.0	0
137	Material Dependence of Energy Spectra of Fast Electrons Generated by Use of High Contrast Laser. The Review of Laser Engineering, 2013, 41, 49.	0.0	0
138	Laser Fusion Implosion Experiments. The Review of Laser Engineering, 1986, 14, 1090-1132.	0.0	0
139	Laser Plasma Interaction. KakuyÅ«gÅ•KenkyÅ«, 1987, 58, 128-142.	0.1	0
140	30TW IntenseLaser Interaction with Matter at ILE, Osaka university. The Review of Laser Engineering, 1997, 25, 118-121.	0.0	0
141	Ultraintense laser p1asma and â€œFast Igntorâ€•research. The Review of Laser Engineering, 1999, 27, 66-67.	0.0	0