

Kazuo A Tanaka

List of Publications by Year in descending order

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141
papers

4,391
citations

136950

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106344

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g-index

141
all docs

141
docs citations

141
times ranked

2350
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Micro-optics for ultra-intense lasers. AIP Advances, 2021, 11, 035214.	1.3	4
3	Ultrafast olivine-ringwoodite transformation during shock compression. Nature Communications, 2021, 12, 4305.	12.8	9
4	Electron transport in a nanowire irradiated by an intense laser pulse. Physical Review Research, 2021, 3, .	3.6	5
5	Current status and highlights of the ELI-NP research program. Matter and Radiation at Extremes, 2020, 5, .	3.9	114
6	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
7	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
8	Boundary driven unconventional mechanism of macroscopic magnetic field generation in beam-plasma interaction. Physical Review Research, 2020, 2, .	3.6	5
9	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
10	Direct observation of imploded core heating via fast electrons with super-penetration scheme. Nature Communications, 2019, 10, 5614.	12.8	8
11	Channel optimization of high-intensity laser beams in millimeter-scale plasmas. Physical Review E, 2018, 97, 043208.	2.1	9
12	Advanced high resolution x-ray diagnostic for HEDP experiments. Scientific Reports, 2018, 8, 16407.	3.3	16
13	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
14	Ultrafast observation of lattice dynamics in laser-irradiated gold foils. Applied Physics Letters, 2017, 110, .	3.3	20
15	Coherent X-ray beam metrology using 2D high-resolution Fresnel-diffraction analysis. Journal of Synchrotron Radiation, 2017, 24, 196-204.	2.4	10
16	New light in nuclear physics: The extreme light infrastructure. Europhysics Letters, 2017, 117, 28001.	2.0	34
17	Confirmation of hot electron preheat with a Cu foam sphere on GEKKO-LFEX laser facility. Physics of Plasmas, 2017, 24, 112709.	1.9	1
18	Dynamic fracture of tantalum under extreme tensile stress. Science Advances, 2017, 3, e1602705.	10.3	41

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19	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
20	Efficient energy absorption of intense ps-laser pulse into nanowire target. Physics of Plasmas, 2016, 23, .	1.9	13
21	Indirect monitoring shot-to-shot shock waves strength reproducibility during pump-probe experiments. Journal of Applied Physics, 2016, 120, .	2.5	5
22	Channeling of multikilojoule high-intensity laser beams in an inhomogeneous plasma. Physical Review E, 2015, 91, 051101.	2.1	10
23	Collimation of Fast Electrons in Critical Density Plasma Channel. Plasma and Fusion Research, 2015, 10, 1304005-1304005.	0.7	0
24	Efficient propagation of ultra-intense laser beam in dense plasma. Plasma Physics and Controlled Fusion, 2015, 57, 064005.	2.1	4
25	Slowdown mechanisms of ultraintense laser propagation in critical density plasma. Physical Review E, 2015, 92, 013106.	2.1	3
26	Laser scattered images observed from carbon plasma stagnation and following molecular formation. Applied Physics Letters, 2014, 104, .	3.3	6
27	Interpenetration and stagnation in colliding laser plasmas. Physics of Plasmas, 2014, 21, 013502.	1.9	33
28	Collimated fast electron beam generation in critical density plasma. Physics of Plasmas, 2014, 21, .	1.9	11
29	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
30	Stopping and transport of fast electrons in superdense matter. Physics of Plasmas, 2013, 20, 083301.	1.9	3
31	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
32	Characteristic of Relativistic Plasma Created by Ultra Intense Laser. The Review of Laser Engineering, 2013, 41, 7.	0.0	0
33	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
34	Material Dependence on Plasma Shielding Induced by Laser Ablation. Plasma and Fusion Research, 2012, 7, 2405065-2405065.	0.7	5
35	Initial cone-in-shell fast-ignition experiments on OMEGA. Physics of Plasmas, 2011, 18, .	1.9	82
36	Measurements of Nonlinear Refractive Indices for Silica Glass Using Z-Scan Method. The Review of Laser Engineering, 2011, 39, 927-930.	0.0	0

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37	Model experiment of cosmic ray acceleration due to an incoherent wakefield induced by an intense laser pulse. <i>Physics of Plasmas</i> , 2011, 18, 010701.	1.9	23
38	Temperature dependence of laser-induced damage thresholds for dielectric and metal coatings. , 2011, , .		0
39	Development of multi-channel electron spectrometer. <i>Review of Scientific Instruments</i> , 2010, 81, 10E535.	1.3	11
40	Laser generated neutron source for neutron resonance spectroscopy. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	67
41	Measurements of high energy density electrons via observation of Cherenkov radiation. <i>Physics of Plasmas</i> , 2010, 17, 056306.	1.9	5
42	Transport study of intense-laser-produced fast electrons in solid targets with a preplasma created by a long pulse laser. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	37
43	Correlation between laser accelerated MeV proton and electron beams using simple fluid model for target normal sheath acceleration. <i>Physics of Plasmas</i> , 2010, 17, 073110.	1.9	11
44	Guiding and confining fast electrons by transient electric and magnetic fields with a plasma inverse cone. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	12
45	Generation of stable and low-divergence 10-MeV quasimonoenergetic electron bunch using argon gas jet. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2009, 12, .	1.8	28
46	Autoinjection of electrons into a wake field using a capillary with attached cone. <i>Physics of Plasmas</i> , 2009, 16, 123103.	1.9	7
47	Evidence of anomalous resistivity for hot electron propagation through a dense fusion core in fast ignition experiments. <i>New Journal of Physics</i> , 2009, 11, 093031.	2.9	20
48	Nondestructive Sensor Using Microwaves From Laser Plasma by Subnanosecond Laser Pulses. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2009, 6, 718-722.	3.1	15
49	Study of ultraintense laser propagation in overdense plasmas for fast ignition. <i>Physics of Plasmas</i> , 2009, 16, 056307.	1.9	25
50	Spatially controlling fast electron transport relevant to fast ignition. , 2009, , .		0
51	Measurements of fast electron scaling generated by petawatt laser systems. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	40
52	Advanced Target Design for the FIREX-I Project. <i>Plasma and Fusion Research</i> , 2009, 4, S1001-S1001.	0.7	1
53	Nondestructive Sensor Using Microwaves from a Laser Plasma. <i>Plasma and Fusion Research</i> , 2009, 4, 003-003.	0.7	1
54	Spectrum modulation of relativistic electrons by laser wakefield. <i>Applied Physics Letters</i> , 2008, 93, 081501.	3.3	8

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55	High Intensity Laser Propagation through Overdense Plasmas. The Review of Laser Engineering, 2008, 36, 1139-1141.	0.0	0
56	Plasma Devices to Control Energetic Electrons Produced by Ultra-intense Lasers. The Review of Laser Engineering, 2008, 36, 1146-1149.	0.0	0
57	On the behavior of ultraintense laser produced hot electrons in self-excited fields. Physics of Plasmas, 2007, 14, 040706.	1.9	39
58	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
59	Relativistic laser channeling in plasmas for fast ignition. Physical Review E, 2007, 76, 066403.	2.1	31
60	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
61	Technological Challenge and Activation of High-Energy PW Laser LFEX. , 2007, , .		0
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	Zonal Proton Generation from Target Edges Using Ultra-Intense Laser Pulse. Plasma and Fusion Research, 2007, 2, 003-003.	0.7	2
64	Microwave Propagation via Laser Plasma Channels. Plasma and Fusion Research, 2007, 2, 012-012.	0.7	0
65	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
66	Optimum Hot Electron Production with Low-Density Foams for Laser Fusion by Fast Ignition. Physical Review Letters, 2006, 96, 255006.	7.8	50
67	Fast Ignition Inertial Fusion: An Introduction and Preview. Fusion Science and Technology, 2006, 49, 249-253.	1.1	16
68	Integral Experiments for Fast Ignition Research. Fusion Science and Technology, 2006, 49, 342-357.	1.1	5
69	Current status of fast ignition and its prospect at Osaka University. , 2006, , .		0
70	Time-resolved imaging of ultrafast laser-driven plasmas using spectral interferometry. , 2006, , .		0
71	Hugoniot measurement of diamond under laser shock compression up to 2TPa. Physics of Plasmas, 2006, 13, 052705.	1.9	53
72	Present Status of Fast Ignition Research and Prospects of FIREX Project. Fusion Science and Technology, 2005, 47, 662-666.	1.1	22

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73	Implosion hydrodynamics of fast ignition targets. <i>Physics of Plasmas</i> , 2005, 12, 056312.	1.9	43
74	Broad-range neutron spectra identification in ultraintense laser interactions with carbon-deuterated plasma. <i>Physics of Plasmas</i> , 2005, 12, 110703.	1.9	29
75	Cherenkov radiation generated by a beam of electrons revisited. <i>Physics of Plasmas</i> , 2005, 12, 093105.	1.9	35
76	Enhancement of energetic electrons and protons by cone guiding of laser light. <i>Physical Review E</i> , 2005, 71, 036403.	2.1	45
77	Calibration of imaging plate for high energy electron spectrometer. <i>Review of Scientific Instruments</i> , 2005, 76, 013507.	1.3	240
78	Laser-Driven Equation-of-State Measurements. <i>Journal of Plasma and Fusion Research</i> , 2004, 80, 432-437.	0.4	1
79	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. <i>Journal of Plasma and Fusion Research</i> , 2004, 80, 442-446.	0.4	0
80	Integrated implosion/heating studies for advanced fast ignition. <i>Physics of Plasmas</i> , 2004, 11, 2746-2753.	1.9	50
81	Characterization of preplasma produced by an ultrahigh intensity laser system. <i>Physics of Plasmas</i> , 2004, 11, 3721-3725.	1.9	19
82	Multi-imaging x-ray streak camera for ultrahigh-speed two-dimensional x-ray imaging of imploded core plasmas (invited). <i>Review of Scientific Instruments</i> , 2004, 75, 3921-3925.	1.3	18
83	Plasma devices to guide and collimate a high density of MeV electrons. <i>Nature</i> , 2004, 432, 1005-1008.	27.8	170
84	Characterization of GEKKO/HIPER-Driven Shock Waves for Equation-of-State Experiments in Ultra-High-Pressure Regime. <i>Journal of Plasma and Fusion Research</i> , 2004, 80, 486-491.	0.4	1
85	Simultaneous Measurement of Temperature, Pressure and Shock-Wave Velocity of Compressed Polystyrene. <i>Journal of Plasma and Fusion Research</i> , 2004, 80, 476-481.	0.4	1
86	Theoretical study of transition radiation from hot electrons generated in the laser-solids interaction. <i>Physics of Plasmas</i> , 2003, 10, 2994-3003.	1.9	60
87	Momentum distribution of accelerated ions in ultra-intense laser-plasma interactions via neutron spectroscopy. <i>Physics of Plasmas</i> , 2003, 10, 3712-3716.	1.9	26
88	Side-on measurement of hydrodynamics of laser-driven plasmas with high space- and time-resolution x-ray imaging technique. <i>Review of Scientific Instruments</i> , 2003, 74, 2198-2201.	1.3	12
89	Spectrum of transition radiation from hot electrons generated in ultra-intense laser plasma interaction. <i>Physics of Plasmas</i> , 2002, 9, 3610-3616.	1.9	13
90	Harmonic emission with cyclotron satellite structure due to strong magnetic fields produced by ultra-intense laser-plasma interaction. <i>Physics of Plasmas</i> , 2002, 9, 3193-3196.	1.9	7

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91	Progress of fast ignitor studies and Petawatt laser construction at Osaka University. Physics of Plasmas, 2002, 9, 2202-2207.	1.9	54
92	X-ray spectroscopy on energy transport and deposition in ultra-intensity laser produced plasmas. AIP Conference Proceedings, 2002, . .	0.4	1
93	Fast heating scalable to laser fusion ignition. Nature, 2002, 418, 933-934.	27.8	445
94	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
95	Progress of Advanced Fusion Energy Studies with Ultra-Intense Lasers.. Journal of Plasma and Fusion Research, 2002, 78, 792-798.	0.4	1
96	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. Nature, 2001, 412, 798-802.	27.8	873
97	Fast ignitor research at the Institute of Laser Engineering, Osaka University. Physics of Plasmas, 2001, 8, 2268-2274.	1.9	72
98	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
99	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
100	Laser-Hole Boring into Overdense Plasmas Measured with Soft X-Ray Laser Probing. Physical Review Letters, 2000, 84, 2405-2408.	7.8	37
101	Long-Scale Jet Formation with Specularly Reflected Light in Ultraintense Laser-Plasma Interactions. Physical Review Letters, 2000, 84, 674-677.	7.8	78
102	Multi-layered flyer accelerated by laser induced shock waves. Physics of Plasmas, 2000, 7, 676-680.	1.9	54
103	Studies of ultra-intense laser plasma interactions for fast ignition. Physics of Plasmas, 2000, 7, 2014-2022.	1.9	115
104	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
105	Performance comparison of self-focusing with 1053- and 351-nm laser pulses. Physical Review E, 1999, 60, 3283-3288.	2.1	20
106	Fast Ignitor Research with Use of Ultra-Intense Laser System.. Journal of Plasma and Fusion Research, 1999, 75, 452-458.	0.4	2
107	Ultraintense laser plasma and "Fast Ignitor" research. The Review of Laser Engineering, 1999, 27, 66-67.	0.0	0
108	Impact Shock Experiments of Mini-Flyers Accelerated by High-Intensity Pulsed Lasers.. The Review of Laser Engineering, 1999, 27, 346-350.	0.0	1

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109	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
110	30TW Intense Laser Interaction with Matter at ILE, Osaka university. The Review of Laser Engineering, 1997, 25, 118-121.	0.0	0
111	Study of Laser-Hole Boring into Overdense Plasmas. Physical Review Letters, 1996, 77, 4906-4909.	7.8	70
112	IR measurement of imploded cryogenic foam target by DD-protons. AIP Conference Proceedings, 1996, , .	0.4	0
113	Measurement of absorption distribution by second harmonic and x-ray images. AIP Conference Proceedings, 1996, , .	0.4	1
114	Implosion experiments with uniformity-improved GEKKO XII: Overview. AIP Conference Proceedings, 1996, , .	0.4	1
115	Boundary integral equations for computer aided design of near-field optics. Electronics and Communications in Japan, 1996, 79, 10-18.	0.2	1
116	Recent progress of implosion experiments with uniformity-improved GEKKO XII laser facility at the Institute of Laser Engineering, Osaka University. Physics of Plasmas, 1996, 3, 2077-2083.	1.9	34
117	Cryogenic deuterium target experiments with the GEKKO XII, green laser system. Physics of Plasmas, 1995, 2, 2495-2503.	1.9	18
118	Indirect-drive inertial fusion research at the Institute of Laser Engineering. AIP Conference Proceedings, 1994, , .	0.4	0
119	Volume integral equation for analysis of quantum electron waveguide circuits. Electronics and Communications in Japan, 1994, 77, 12-20.	0.2	2
120	New integral equations for designing dielectric waveguide bend circuits: Guided-mode extracted integral equations. Electronics and Communications in Japan, 1993, 76, 1-11.	0.2	1
121	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
122	Beatwave excitation of plasma wave and electron acceleration. AIP Conference Proceedings, 1991, , .	0.4	1
123	Time-resolved measurements of laser-induced shock waves in deuterated polystyrene porous targets by x-ray backlighting. Physics of Fluids B, 1991, 3, 735-744.	1.7	7
124	Development of a Schwarzschild type X-ray microscope.. The Review of Laser Engineering, 1990, 18, 938-943.	0.0	0
125	Three-dimensional imaging of laser imploded targets. Journal of Applied Physics, 1990, 68, 1483-1488.	2.5	13
126	Development of x-ray emission computed tomography for ICF research. Review of Scientific Instruments, 1990, 61, 2783-2785.	1.3	6

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127	Energy transport experiments at Institute of Laser Engineering, Osaka University. Laser and Particle Beams, 1989, 7, 495-504.	1.0	2
128	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
129	Effect of laser irradiation on the superconductive properties of (Y0.95Sm0.05) Ba2Cu3Ox. Physica Status Solidi A, 1989, 116, 787-792.	1.7	1
130	Detection system of the cryogenic target default for laser fusion experiment.. The Review of Laser Engineering, 1989, 17, 721-726.	0.0	3
131	Enhancement of soft x-ray emission using prepulses with 2ï¿½ and 4ï¿½ laser plasmas. Journal of Applied Physics, 1988, 63, 1787-1789.	2.5	9
132	Energy transport in aluminum targets irradiated by a 263-nm laser. Applied Physics Letters, 1988, 52, 786-788.	3.3	6
133	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
134	Enhancement of keV x-ray emission in laser-produced plasmas by a weak prepulse laser. Applied Physics Letters, 1987, 50, 720-722.	3.3	72
135	Laser Plasma Interaction. Kakuyō Kenkyū, 1987, 58, 128-142.	0.1	0
136	Measurements of mass ablation rate and pressure in planar targets irradiated by 0.27-μm laser light. Journal of Applied Physics, 1986, 60, 3840-3844.	2.5	16
137	Soft x-ray emission from 10, 2ï¿½, and 4ï¿½ laser-produced plasmas. Journal of Applied Physics, 1986, 59, 3050-3052.	2.5	93
138	Diode-array coupled time-resolved transmission grating spectrometer. Review of Scientific Instruments, 1986, 57, 2489-2492.	1.3	2
139	Laser Fusion Implosion Experiments. The Review of Laser Engineering, 1986, 14, 1090-1132.	0.0	0
140	Analysis of propagation characteristic of Bleustein-Gulyaev waves at surface imperfections. Applied Physics Letters, 1978, 32, 83-85.	3.3	7
141	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. , 0, .		1