Kazuo A Tanaka

List of Publications by Citations

128 papers	3,769 citations	31 h-index	59 g-index
141 ext. papers	4,074 ext. citations	4.1 avg, IF	4.04 L-index

#	Paper	IF	Citations
128	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. *Nature*, **2001**, 412, 798-802	50.4	780
127	Fast heating scalable to laser fusion ignition. *Nature*, **2002**, 418, 933-4	50.4	398
126	Calibration of imaging plate for high energy electron spectrometer. *Review of Scientific Instruments*, **2005**, 76, 013507	1.7	217
125	Plasma devices to guide and collimate a high density of MeV electrons. *Nature*, **2004**, 432, 1005-8	50.4	151
124	Studies of ultra-intense laser plasma interactions for fast ignition. *Physics of Plasmas*, **2000**, 7, 2014-2022	2.1	103
123	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	2.1	100
122	The extreme light infrastructure-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	14.4	90
121	Plasma jet formation and magnetic-field generation in the intense laser plasma under oblique incidence. *Physics of Plasmas*, **1999**, 6, 2855-2861	2.1	88
120	Soft x-ray emission from 0, 20, and 40 laser-produced plasmas. *Journal of Applied Physics*, **1986**, 59, 3050-3052	2.5	79
119	Initial cone-in-shell fast-ignition experiments on OMEGAa). *Physics of Plasmas*, **2011**, 18, 056305	2.1	72
118	Long-scale jet formation with specularly reflected light in ultraintense laser-plasma interactions. *Physical Review Letters*, **2000**, 84, 674-7	7.4	71
117	Fast ignitor research at the Institute of Laser Engineering, Osaka University. *Physics of Plasmas*, **2001**, 8, 2268-2274	2.1	69
116	Study of Laser-Hole Boring into Overdense Plasmas. *Physical Review Letters*, **1996**, 77, 4906-4909	7.4	68
115	Enhancement of keV x-ray emission in laser-produced plasmas by a weak prepulse laser. *Applied Physics Letters*, **1987**, 50, 720-722	3.4	60
114	Current status and highlights of the ELI-NP research program. *Matter and Radiation at Extremes*, **2020**, 5, 024402	4.7	49
113	Theoretical study of transition radiation from hot electrons generated in the laser-solid interaction. *Physics of Plasmas*, **2003**, 10, 2994-3003	2.1	49
112	Laser generated neutron source for neutron resonance spectroscopy. *Physics of Plasmas*, **2010**, 17, 100701	2.1	48

111	Integrated implosion/heating studies for advanced fast ignition. *Physics of Plasmas*, **2004**, 11, 2746-2753	2.1	48
110	Hugoniot measurement of diamond under laser shock compression up to 2TPa. *Physics of Plasmas*, **2006**, 13, 052705	2.1	47
109	Progress of fast ignitor studies and Petawatt laser construction at Osaka University. *Physics of Plasmas*, **2002**, 9, 2202-2207	2.1	47
108	Multi-layered flyer accelerated by laser induced shock waves. *Physics of Plasmas*, **2000**, 7, 676-680	2.1	47
107	Optimum hot electron production with low-density foams for laser fusion by fast ignition. *Physical Review Letters*, **2006**, 96, 255006	7.4	45
106	Implosion hydrodynamics of fast ignition targetsa). *Physics of Plasmas*, **2005**, 12, 056312	2.1	41
105	Enhancement of energetic electrons and protons by cone guiding of laser light. *Physical Review E*, **2005**, 71, 036403	2.4	41
104	On the behavior of ultraintense laser produced hot electrons in self-excited fields. *Physics of Plasmas*, **2007**, 14, 040706	2.1	39
103	Measurements of fast electron scaling generated by petawatt laser systems. *Physics of Plasmas*, **2009**, 16, 062703	2.1	38
102	Laser-hole boring into overdense plasmas measured with soft X-Ray laser probing. *Physical Review Letters*, **2000**, 84, 2405-8	7.4	36
101	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, 060704	2.1	35
100	Cherenkov radiation generated by a beam of electrons revisited. *Physics of Plasmas*, **2005**, 12, 093105	2.1	33
99	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	2.1	33
98	Relativistic laser channeling in plasmas for fast ignition. *Physical Review E*, **2007**, 76, 066403	2.4	31
97	Dynamic fracture of tantalum under extreme tensile stress. *Science Advances*, **2017**, 3, e1602705	14.3	30
96	New light in nuclear physics: The extreme light infrastructure. *Europhysics Letters*, **2017**, 117, 28001	1.6	28
95	Interpenetration and stagnation in colliding laser plasmas. *Physics of Plasmas*, **2014**, 21, 013502	2.1	28
94	Broad-range neutron spectra identification in ultraintense laser interactions with carbon-deuterated plasma. *Physics of Plasmas*, **2005**, 12, 110703	2.1	26

93	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	4.9	26
92	Momentum distribution of accelerated ions in ultra-intense laser plasma interactions via neutron spectroscopy. *Physics of Plasmas*, **2003**, 10, 3712-3716	2.1	25
91	Generation of stable and low-divergence 10-MeV quasimonoenergetic electron bunch using argon gas jet. *Physical Review Special Topics: Accelerators and Beams*, **2009**, 12,		23
90	Model experiment of cosmic ray acceleration due to an incoherent wakefield induced by an intense laser pulse. *Physics of Plasmas*, **2011**, 18, 010701	2.1	23
89	Study of ultraintense laser propagation in overdense plasmas for fast ignitiona). *Physics of Plasmas*, **2009**, 16, 056307	2.1	22
88	Stimulated Raman back-scattering from a mm-scale inhomogeneous plasma irradiated with ultra-intense laser pulse. *Physics of Plasmas*, **2002**, 9, 3552-3557	2.1	21
87	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
86	Performance comparison of self-focusing with 1053- and 351-nm laser pulses. *Physical Review E*, **1999**, 60, 3283-8	2.4	19
85	Characterization of preplasma produced by an ultrahigh intensity laser system. *Physics of Plasmas*, **2004**, 11, 3721-3725	2.1	17
84	Present Status of Fast Ignition Research and Prospects of FIREX Project. *Fusion Science and Technology*, **2005**, 47, 662-666	1.1	16
83	Nondestructive Sensor Using Microwaves From Laser Plasma by Subnanosecond Laser Pulses. *IEEE Geoscience and Remote Sensing Letters*, **2009**, 6, 718-722	4.1	15
82	Reentrant cone angle dependence of the energetic electron slope temperature in high-intensity laser-plasma interactions. *Physics of Plasmas*, **2007**, 14, 050701	2.1	15
81	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	1.7	15
80	Cryogenic deuterium target experiments with the GEKKO XII, green laser system. *Physics of Plasmas*, **1995**, 2, 2495-2503	2.1	15
79	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	15
78	Ultrafast observation of lattice dynamics in laser-irradiated gold foils. *Applied Physics Letters*, **2017**, 110, 071905	3.4	14
77	Fast Ignition Inertial Fusion: An Introduction and Preview. *Fusion Science and Technology*, **2006**, 49, 249-253	1.1	14
76	Spectrum of transition radiation from hot electrons generated in ultra-intense laser plasma interaction. *Physics of Plasmas*, **2002**, 9, 3610-3616	2.1	13

75	Efficient energy absorption of intense ps-laser pulse into nanowire target. *Physics of Plasmas*, **2016**, 23, 063105	2.1	11
74	Guiding and confining fast electrons by transient electric and magnetic fields with a plasma inverse cone. *Physics of Plasmas*, **2009**, 16, 020702	2.1	11
73	Long Ion Mean-Free Path and Nonequilibrium Radiation Effects on High-Aspect-Ratio Laser-Driven Implosions. *Laser and Particle Beams*, **1989**, 7, 259-265	0.9	11
72	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	1.7	10
71	Microcracks, spall and fracture in glass: A study using short pulsed laser shock waves. *Journal of Applied Physics*, **1998**, 83, 3583-3594	2.5	10
70	Advanced high resolution x-ray diagnostic for HEDP experiments. *Scientific Reports*, **2018**, 8, 16407	4.9	10
69	Collimated fast electron beam generation in critical density plasma. *Physics of Plasmas*, **2014**, 21, 113103	2.1	9
68	Correlation between laser accelerated MeV proton and electron beams using simple fluid model for target normal sheath acceleration. *Physics of Plasmas*, **2010**, 17, 073110	2.1	9
67	Recent results and future prospects of laser fusion research at ILE, Osaka. *European Physical Journal D*, **2007**, 44, 259-264	1.3	9
66	Enhancement of soft x-ray emission using prepulses with 2 and 4 laser plasmas. *Journal of Applied Physics*, **1988**, 63, 1787-1789	2.5	9
65	Channel optimization of high-intensity laser beams in millimeter-scale plasmas. *Physical Review E*, **2018**, 97, 043208	2.4	8
64	Channeling of multikilojoule high-intensity laser beams in an inhomogeneous plasma. *Physical Review E*, **2015**, 91, 051101	2.4	8
63	Development of multi-channel electron spectrometer. *Review of Scientific Instruments*, **2010**, 81, 10E535	1.7	8
62	Spectrum modulation of relativistic electrons by laser wakefield. *Applied Physics Letters*, **2008**, 93, 081501	3.4	8
61	Three-dimensional imaging of laser imploded targets. *Journal of Applied Physics*, **1990**, 68, 1483-1488	2.5	8
60	Coherent X-ray beam metrology using 2D high-resolution Fresnel-diffraction analysis. *Journal of Synchrotron Radiation*, **2017**, 24, 196-204	2.4	7
59	Autoinjection of electrons into a wake field using a capillary with attached cone. *Physics of Plasmas*, **2009**, 16, 123103	2.1	7
58	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		7

57	Harmonic emission with cyclotron satellite structure due to strong magnetic fields produced by ultra-intense laserþlasma interaction. *Physics of Plasmas*, **2002**, 9, 3193-3196	2.1	6
56	Analysis of propagation characteristic of Bleustein-Gulyaev waves at surface imperfections. *Applied Physics Letters*, **1978**, 32, 83-85	3.4	6
55	A ten-inch manipulator (TIM) based fast-electron spectrometer with multiple viewing angles (OU-ESM). *Review of Scientific Instruments*, **2019**, 90, 063501	1.7	5
54	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	1.7	5
53	Measurements of high energy density electrons via observation of Cherenkov radiationa). *Physics of Plasmas*, **2010**, 17, 056306	2.1	5
52	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	1.7	5
51	Development of x-ray emission computed tomography for ICF research. *Review of Scientific Instruments*, **1990**, 61, 2783-2785	1.7	5
50	Energy transport in aluminum targets irradiated by a 263-nm laser. *Applied Physics Letters*, **1988**, 52, 786-788	3.4	5
49	Enhancement of laser-focused intensity greater than 10 times through a re-entrant cone in the petawatt regime. *Optics Letters*, **2020**, 45, 3454-3457	3	5
48	Material Dependence on Plasma Shielding Induced by Laser Ablation. *Plasma and Fusion Research*, **2012**, 7, 2405065-2405065	0.5	5
47	Ultrafast olivine-ringwoodite transformation during shock compression. *Nature Communications*, **2021**, 12, 4305	17.4	5
46	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	4
45	Indirect monitoring shot-to-shot shock waves strength reproducibility during pumpþrobe experiments. *Journal of Applied Physics*, **2016**, 120, 035901	2.5	4
44	Laser scattered images observed from carbon plasma stagnation and following molecular formation. *Applied Physics Letters*, **2014**, 104, 244105	3.4	4
43	Integral Experiments for Fast Ignition Reserach. *Fusion Science and Technology*, **2006**, 49, 342-357	1.1	4
42	Energetic Particle and Gamma Ray Production by Ultra-Intense Laser and Their Applications. *The Review of Laser Engineering*, **2001**, 29, 238-242	0	4
41	Direct observation of imploded core heating via fast electrons with super-penetration scheme. *Nature Communications*, **2019**, 10, 5614	17.4	4
40	Stopping and transport of fast electrons in superdense matter. *Physics of Plasmas*, **2013**, 20, 083301	2.1	3

39	Efficient propagation of ultra-intense laser beam in dense plasma. *Plasma Physics and Controlled Fusion*, **2015**, 57, 064005	2	3
38	Slowdown mechanisms of ultraintense laser propagation in critical density plasma. *Physical Review E*, **2015**, 92, 013106	2.4	2
37	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	0.5	2
36	Energy transport experiments at Institute of Laser Engineering, Osaka University. *Laser and Particle Beams*, **1989**, 7, 495-504	0.9	2
35	Diode-array coupled time-resolved transmission grating spectrometer. *Review of Scientific Instruments*, **1986**, 57, 2489-2492	1.7	2
34	Zonal Proton Generation from Target Edges Using Ultra-Intense Laser Pulse. *Plasma and Fusion Research*, **2007**, 2, 003-003	0.5	2
33	Detection system of the cryogenic target default for laser fusion experiment.. *The Review of Laser Engineering*, **1989**, 17, 721-726	0	2
32	Electron transport in a nanowire irradiated by an intense laser pulse. *Physical Review Research*, **2021**, 3,	3.9	2
31	Confirmation of hot electron preheat with a Cu foam sphere on GEKKO-LFEX laser facility. *Physics of Plasmas*, **2017**, 24, 112709	2.1	1
30	Laser-Driven Equation-of-State Measurements. *Journal of Plasma and Fusion Research*, **2004**, 80, 432-437		1
29	Effect of laser irradiation on the superconductive properties of (Y0.95Sm0.05) Ba2Cu3Ox. *Physica Status Solidi A*, **1989**, 116, 787-792		1
28	Finite Ion-Relaxation and Nonequilibrium Radiation Effects on Laser-Driven Implosions. *Journal of the Physical Society of Japan*, **1988**, 57, 2237-2240	1.5	1
27	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		1
26	Advanced Target Design for the FIREX-I Project. *Plasma and Fusion Research*, **2009**, 4, S1001-S1001	0.5	1
25	Progress of Advanced Fusion Energy Studies with Ultra-Intense Lasers.. *Journal of Plasma and Fusion Research*, **2002**, 78, 792-798		1
24	Simultaneous Measurement of Temperature, Pressure and Shock-Wave Velocity of Compressed Polystyrene. *Journal of Plasma and Fusion Research*, **2004**, 80, 476-481		1
23	Influence of Electrostatic and Magnetic Fields on Hot Electron Emission in Ultra-Intense Laser Matter Interactions. *Plasma and Fusion Research*, **2007**, 2, 015-015	0.5	1
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21	Fast Ignitor Research with Use of Ultra-Intense Laser System.. *Journal of Plasma and Fusion Research*, **1999**, 75, 452-458		1
20	Impact Shock Experiments of Mini-Flyers Accelerated by High-Intensity Pulsed Lasers.. *The Review of Laser Engineering*, **1999**, 27, 346-350	0	1
19	Experimental design of radiation reaction by 1 PW laser pulse and linear accelerator electron bunch. *High Energy Density Physics*, **2021**, 38, 100919	1.2	1
18	Micro-optics for ultra-intense lasers. *AIP Advances*, **2021**, 11, 035214	1.5	1
17	Boundary integral equations for computer aided design of near-field optics. *Electronics and Communications in Japan*, **1996**, 79, 10-18		0
16	Volume integral equation for analysis of quantum electron waveguide circuits. *Electronics and Communications in Japan*, **1994**, 77, 12-20		0
15	New integral equations for designing dielectric waveguide bend circuits: Guided-mode extracted integral equations. *Electronics and Communications in Japan*, **1993**, 76, 1-11		0
14	Collimation of Fast Electrons in Critical Density Plasma Channel. *Plasma and Fusion Research*, **2015**, 10, 1304005-1304005	0.5	
13	Measurements of Nonlinear Refractive Indices for Silica Glass Using Z-Scan Method. *The Review of Laser Engineering*, **2011**, 39, 927-930	0	
12	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		
11	Development of a Schwarzschild type X-ray microscope.. *The Review of Laser Engineering*, **1990**, 18, 938-943	0	
10	Microwave Propagation via Laser Plasma Channels. *Plasma and Fusion Research*, **2007**, 2, 012-012	0.5	
9	High Intensity Laser Propagation though Overdense Plasmas. *The Review of Laser Engineering*, **2008**, 36, 1139-1141	0	
8	Plasma Devices to Control Energetic Electrons Produced by Ultra-intense Lasers. *The Review of Laser Engineering*, **2008**, 36, 1146-1149	0	
7	Laser Plasma Interaction. *Kakuyūgō Kenkyū*, **1987**, 58, 128-142		
6	30TW IntenseLaser Interaction with Matter at ILE, Osaka university. *The Review of Laser Engineering*, **1997**, 25, 118-121	0	
5	Ultraintense laser p1asma and Fast Ignttor research. *The Review of Laser Engineering*, **1999**, 27, 66-67	0	
4	Nondestructive Sensor Using Microwaves from a Laser Plasma. *Plasma and Fusion Research*, **2009**, 4, 003-003	0.5	

List of Publications

3	Characteristic of Relativistic Plasma Created by Ultra Intense Laser. *The Review of Laser Engineering* , **2013**, 41, 7	0
2	Material Dependence of Energy Spectra of Fast Electrons Generated by Use of High Contrast Laser. *The Review of Laser Engineering*, **2013**, 41, 49	0
1	Laser Fusion Implosion Experiments. *The Review of Laser Engineering*, **1986**, 14, 1090-1132	0