Tomoyuki Johzaki

List of Publications by Year
in descending order

87 papers	1,610 citations	304743 22 h-index	315739 38 g-index
88 all docs	88 docs citations	88 times ranked	1041 citing authors

#	Article	IF	Citations
1	Kilotesla Magnetic Field due to a Capacitor-Coil Target Driven by High Power Laser. Scientific Reports, 2013, 3, 1170.	3.3	246
2	Optimization of cone target geometry for fast ignition. Physics of Plasmas, 2007, 14, .	1.9	75
3	Magnetized fast isochoric laser heating for efficient creation of ultra-high-energy-density states. Nature Communications, 2018, 9, 3937.	12.8	75
4	Suppression of the Rayleigh-Taylor Instability due to Self-Radiation in a Multiablation Target. Physical Review Letters, 2004, 92, 195001.	7.8	74
5	Simulation and design study of cryogenic cone shell target for Fast Ignition Realization Experiment project. Physics of Plasmas, 2007, 14, 056303.	1.9	57
6	Experimental study on self-acceleration in expanding spherical hydrogen-air flames. International Journal of Hydrogen Energy, 2018, 43, 12556-12564.	7.1	57
7	Fast ignition integrated experiments with Gekko and LFEX lasers. Plasma Physics and Controlled Fusion, 2011, 53, 124029.	2.1	55
8	Fast ignition realization experiment with high-contrast kilo-joule peta-watt LFEX laser and strong external magnetic field. Physics of Plasmas, 2016, 23, .	1.9	54
9	Fast ignition integrated interconnecting code project for cone-guided targets. Laser and Particle Beams, 2006, 24, 191-198.	1.0	45
10	Plasma physics and laser development for the Fast-Ignition Realization Experiment (FIREX) Project. Nuclear Fusion, 2009, 49, 104024.	3.5	45
11	Experimental Evidence of Impact Ignition: 100-Fold Increase of Neutron Yield by Impactor Collision. Physical Review Letters, 2009, 102, 235002.	7.8	45
12	High-energy-density plasmas generation on GEKKO-LFEX laser facility for fast-ignition laser fusion studies and laboratory astrophysics. Plasma Physics and Controlled Fusion, 2012, 54, 124042.	2.1	40
13	Prepulse effects on the generation of high energy electrons in fast ignition scheme. Physics of Plasmas, 2010, 17, .	1.9	38
14	KÎ± spectroscopy to study energy transport in ultrahigh-intensity laser produced plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 81, 327-337.	2.3	37
15	Foam materials for cryogenic targets of fast ignition realization experiment (FIREX). Nuclear Fusion, 2005, 45, 1277-1283.	3.5	34
16	Holistic Simulation for FIREX Project with FI³. Laser and Particle Beams, 2007, 25, 621-629.	1.0	34
17	Electron surface acceleration on a solid capillary target inner wall irradiated with ultraintense laser pulses. Physics of Plasmas, 2007, 14, 053112.	1.9	31
18	Ultrahigh-contrast kilojoule-class petawatt LFEX laser using a plasma mirror. Applied Optics, 2016, 55, 6850.	2.1	30

#	Article	IF	Citations
19	Present status of fast ignition realization experiment and inertial fusion energy development. Nuclear Fusion, 2013, 53, 104021.	3.5	27
20	Petapascal Pressure Driven by Fast Isochoric Heating with a Multipicosecond Intense Laser Pulse. Physical Review Letters, 2020, 124, 035001.	7.8	26
21	Experimental study on the onset of flame acceleration due to cellular instabilities. Journal of Loss Prevention in the Process Industries, 2019, 60, 264-268.	3.3	24
22	Heating efficiency evaluation with mimicking plasma conditions of integrated fast-ignition experiment. Physical Review E, 2015, 91, 063102.	2.1	23
23	Study of fast electron transport in hot dense matter using x-ray spectroscopy. Plasma Physics and Controlled Fusion, 2005, 47, B823-B831.	2.1	22
24	Generation and transport of fast electrons inside cone targets irradiated by intense laser pulses. Laser and Particle Beams, 2006, 24, 5-8.	1.0	22
25	Integrated experiments of fast ignition targets by Gekko-XII and LFEX lasers. High Energy Density Physics, 2012, 8, 227-230.	1.5	22
26	X-ray line polarization spectroscopy to study hot electron transport in ultra-short laser produced plasma. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 99, 305-313.	2.3	21
27	Fokkerâ€“Planck simulations for core heating in subignition cone-guiding fast ignition targets. Physics of Plasmas, 2009, 16, .	1.9	21
28	Generation and confinement of high energy electrons generated by irradiation of ultra-intense short laser pulses onto cone targets. Laser and Particle Beams, 2008, 26, 207-212.	1.0	20
29	Thermal Spray Using a High-Frequency Pulse Detonation Combustor Operated in the Liquid-Purge Mode. Journal of Thermal Spray Technology, 2016, 25, 494-508.	3.1	20
30	Comparative study of laser ignition and spark-plug ignition in high-speed flows. Combustion and Flame, 2018, 191, 408-416.	5.2	19
31	Progress and perspectives of fast ignition. Plasma Physics and Controlled Fusion, 2004, 46, B41-B49.	2.1	18
32	Generation of pre-formed plasma and its reduction for fast-ignition. Laser and Particle Beams, 2012, 30, 95-102.	1.0	18
33	An experimental study on the ignition ability of a laser-induced gaseous breakdown. Combustion and Flame, 2017, 178, 1-6.	5.2	18
34	Self-similar propagation of spherically expanding flames in lean hydrogenâ€“air mixtures. International Journal of Hydrogen Energy, 2020, 45, 25608-25614.	7.1	16
35	Analysis of Core Plasma Heating by Relativistic Electrons in Fast Ignition. Fusion Science and Technology, 2003, 43, 428-436.	1.1	15
36	Minimum ignition energy and minimum explosible concentration of L-isoleucine and glycine powder. Powder Technology, 2019, 347, 207-214.	4.2	14

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37	Control of unsteady laser-produced plasma-flow with a multiple-coil magnetic nozzle. Scientific Reports, 2017, 7, 8910.	3.3	13
38	Electromagnetic field growth triggering super-ponderomotive electron acceleration during multi-picosecond laser-plasma interaction. Communications Physics, 2019, 2, .	5.3	11
39	Numerical study of KÎ± emission from partially ionized chlorine. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 81, 237-246.	2.3	10
40	X-ray backlight measurement of preformed plasma by kJ-class petawatt LFEX laser. Journal of Applied Physics, 2012, 112, 063301.	2.5	10
41	Direct measurement of the impulse in a magnetic thrust chamber system for laser fusion rocket. Applied Physics Letters, 2011, 99, .	3.3	9
42	Implosion and core heating requirements in subignition experiments FIREX-I. Physics of Plasmas, 2008, 15, 062702.	1.9	8
43	The formation of high-density core plasma in non-spherical implosion using high-resolution two-dimensional integrated implosion code. Journal of Plasma Physics, 2006, 72, 791.	2.1	7
44	Intensification of laser-produced relativistic electron beam using converging magnetic fields for ignition in fast ignition laser fusion. High Energy Density Physics, 2020, 36, 100841.	1.5	7
45	Enhancement of water-window soft x-ray emission from laser-produced Au plasma under low-pressure nitrogen atmosphere. Optics Letters, 2019, 44, 1439.	3.3	7
46	Design of a cone target for fast ignition. EPJ Web of Conferences, 2013, 59, 03009.	0.3	6
47	Energy distribution of fast electrons accelerated by high intensity laser pulse depending on laser pulse duration. Journal of Physics: Conference Series, 2016, 717, 012102.	0.4	6
48	Simulation on interactions of X-ray and charged particles with first wall for IFE reactor. Fusion Engineering and Design, 2005, 73, 95-103.	1.9	5
49	Effects of long rarefied plasma on fast electron generation for FIREX-I targets. Laser and Particle Beams, 2012, 30, 103-109.	1.0	5
50	Quantitative measurement of hard X-ray spectra from laser-driven fast ignition plasma. High Energy Density Physics, 2013, 9, 435-438.	1.5	5
51	The Measurement of Plasma Structure in a Magnetic Thrust Chamber. Plasma and Fusion Research, 2016, 11, 3406012-3406012.	0.7	5
52	Reinjection of transmitted laser light into laser-produced plasma for efficient laser ignition. Applied Optics, 2016, 55, 1132.	2.1	5
53	Experiments on laser cleaning of sooted optical windows. Applied Optics, 2018, 57, 10522.	1.8	5
54	Ignition condition and gain scaling of low temperature ignition targets. Nuclear Fusion, 1998, 38, 467-479.	3.5	4

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55	Accuracy validation of flux limited diffusion models for calculating alpha particle transport in ICF plasmas. Nuclear Fusion, 1999, 39, 753-764.	3.5	4
56	Simulation Study of Ignition and Burn Characteristics of Fast Ignition DT Targets. Plasma and Fusion Research, 2007, 2, 041-041.	0.7	4
57	High Energy Electron Generation by Laser-Cone Interaction. Plasma and Fusion Research, 2007, 2, 018-018.	0.7	4
58	Effects of pre-formed plasma inside a guiding cone in fast ignition scheme. Journal of Physics: Conference Series, 2010, 244, 022079.	0.4	3
59	Reduction of air flow rate for pulse-detonation-turbine-engine operation by water-droplet injection. Journal of Thermal Science and Technology, 2016, 11, JTST0022-JTST0022.	1.1	3
60	Observation of water-window soft x-ray emission from laser-produced Au plasma under optically thin condition. High Energy Density Physics, 2020, 37, 100845.	1.5	3
61	Enhanced relativistic electron beams intensity with self-generated resistive magnetic field. High Energy Density Physics, 2020, 36, 100773.	1.5	3
62	Hot Electron Spectra in Plain, Cone and Integrated Targets for FIREX-I using Electron Spectrometer. Plasma and Fusion Research, 2013, 8, 2404125-2404125.	0.7	2
63	Experimental demonstration of ion extraction from magnetic thrust chamber for laser fusion rocket. Japanese Journal of Applied Physics, 2018, 57, 050303.	1.5	2
64	Thomson Scattering Measurement of Laser-Produced Plasma in a Magnetic Thrust Chamber. Plasma and Fusion Research, 2018, 13, 1306016-1306016.	0.7	2
65	Hot Electron and Ion Spectra in Axial and Transverse Laser Irradiation in the GXII-LFEX Direct Fast Ignition Experiment. Plasma and Fusion Research, 2021, 16, 2404076-2404076.	0.7	2
66	Analysis of Laser Wavelength and Energy Dependences of the Impulse in a Magnetic Thrust Chamber System for a Laser Fusion Rocket. Transactions of the Japan Society for Aeronautical and Space Sciences, 2013, 56, 170-172.	0.7	2
67	10-Hz beads pellet injection and laser engagement. Nuclear Fusion, 0, , .	3.5	2
68	Experimental Demonstration of Magnetic Thrust Chamber for a Laser Fusion Rocket. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2012, 10, Pb_109-Pb_114.	0.2	1
69	Direct heating of imploded plasma in the fast ignition. Journal of Physics: Conference Series, 2016, 688, 012114.	0.4	1
70	Enhanced heat transport in ablation plasma under transverse magnetic field by upper hybrid resonance heating. High Energy Density Physics, 2019, 30, 8-12.	1.5	1
71	Deflagration-to-detonation transition in laser-ignited explosive gas contained in a smooth-wall tube. Combustion and Flame, 2020, 219, 275-282.	5.2	1
72	Advanced Target Design for the FIREX-I Project. Plasma and Fusion Research, 2009, 4, S1001-S1001.	0.7	1

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73	Simple Analysis of the Laser-to-Core Energy Coupling Efficiency with Magnetized Fast Isochoric Laser Heating. Plasma and Fusion Research, 2019, 14, 3404138-3404138.	0.7	1
74	Direct fast heating efficiency of a counter-imploded core plasma employing a laser for fast ignition experiments (LFEX). Nuclear Fusion, 2022, 62, 096013.	3.5	1
75	Neutron Heating Effect in Laser-Imploded DT Pellet. Journal of Nuclear Science and Technology, 1995, 32, 81-83.	1.3	0
76	Neutronic effects in reactor-size ICF targets. Fusion Engineering and Design, 1999, 44, 181-185.	1.9	0
77	Fast ignition integrated experiments on GEKKO-LFEX laser facility. , 2011, , .		0
78	Energy Transportation by MeV Hot Electrons in Fast Ignition Plasma Driven with LFEX PW Laser. Plasma and Fusion Research, 2014, 9, 1404118-1404118.	0.7	0
79	Acceleration of Miniature Targets by Kilo-Tesla Magnetic Field. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2015, 13, 17-21.	0.2	0
80	Development of a magnetic thrust chamber for a laser fusion rocket. , 2016, , .		0
81	Numerical analysis on a conical shaped target for laser fusion rocket. High Energy Density Physics, 2020, 37, 100894.	1.5	0
82	Improvement of ignition and burning target designÂfor fast ignition scheme. Nuclear Fusion, 2021, 61, 126032.	3.5	0
83	Integration of Individual Simulation Codes for Fast Ignition. The Review of Laser Engineering, 2004, 32, 324-329.	0.0	0
84	Distortion of Bulk-Electron Distribution Function and Its Effect on Core Heating in Fast Ignition Plasmas. Plasma and Fusion Research, 2010, 5, S2070-S2070.	0.7	0
85	Magnetic Thrust Chamber Propulsion System for Controlling Laser-Produced Plasma by Magnetic Fields. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2010, 8, Tb_1-Tb_4.	0.2	0
86	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
87	Efficient Fast Heating of Dense Core Plasma by Laser-Driven Strong Magnetic Field. The Review of Laser Engineering, 2019, 47, 536.	0.0	0