Yasunobu Arikawa

List of Publications by Year
in descending order

128 papers	1,353 citations	331538 21 h-index	434063 31 g-index
131 all docs	131 docs citations	131 times ranked	1030 citing authors

#	Article	IF	Citations
1	Direct measurement of kilo-tesla level magnetic field generated with laser-driven capacitor-coil target by proton deflectometry. Applied Physics Letters, 2016, 108, .	1.5	88
2	Magnetized fast isochoric laser heating for efficient creation of ultra-high-energy-density states. Nature Communications, 2018, 9, 3937.	5.8	75
3	Boosting laser-ion acceleration with multi-picosecond pulses. Scientific Reports, 2017, 7, 42451.	1.6	71
4	Fast ignition integrated experiments with Gekko and LFEX lasers. Plasma Physics and Controlled Fusion, 2011, 53, 124029.	0.9	55
5	Fast ignition realization experiment with high-contrast kilo-joule peta-watt LFEX laser and strong external magnetic field. Physics of Plasmas, 2016, 23, .	0.7	54
6	Pr3+-doped fluoro-oxide lithium glass as scintillator for nuclear fusion diagnostics. Review of Scientific Instruments, 2009, 80, 113504.	0.6	41
7	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.	0.9	40
8	Acceleration to high velocities and heating by impact using Nike KrF laser. Physics of Plasmas, 2010, 17, 056317.	0.7	36
9	In-Target Protonâ€“Boron Nuclear Fusion Using a PW-Class Laser. Applied Sciences (Switzerland), 2022, 12, 1444.	1.3	31
10	Ultrahigh-contrast kilojoule-class petawatt LFEX laser using a plasma mirror. Applied Optics, 2016, 55, 6850.	2.1	30
11	Magnetohydrodynamics of laser-produced high-energy-density plasma in a strong external magnetic field. Physical Review E, 2017, 95, 053204.	0.8	29
12	Direct Heating of a Laser-Imploded Core by Ultraintense Laser-Driven Ions. Physical Review Letters, 2015, 114, 195002.	2.9	28
13	Proof-of-principle experiment for laser-driven cold neutron source. Scientific Reports, 2020, 10, 20157.	1.6	28
14	Petapascal Pressure Driven by Fast Isochoric Heating with a Multipicosecond Intense Laser Pulse. Physical Review Letters, 2020, 124, 035001.	2.9	26
15	Longitudinal and transverse spatial beam profile measurement of relativistic electron bunch by electro-optic sampling. Applied Physics Express, 2021, 14, 026503.	1.1	26
16	Flash KÎ± radiography of laser-driven solid sphere compression for fast ignition. Applied Physics Letters, 2016, 108, .	1.5	25
17	Energetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math> -particle sources produced through proton-boron reactions by high-energy high-intensity laser beams. Physical Review E, 2021, 103, 053202.	0.8	25
18	New insights into the laser produced electronâ€“positron pairs. New Journal of Physics, 2013, 15, 065010.	1.2	24

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19	Heating efficiency evaluation with mimicking plasma conditions of integrated fast-ignition experiment. Physical Review E, 2015, 91, 063102.	0.8	23
20	High-Intensity Neutron Generation via Laser-Driven Photonuclear Reaction. Plasma and Fusion Research, 2015, 10, 2404003-2404003.	0.3	23
21	Integrated experiments of fast ignition targets by Gekko-XII and LFEX lasers. High Energy Density Physics, 2012, 8, 227-230.	0.4	22
22	Generation of Î±-Particle Beams With a Multi-kJ, Peta-Watt Class Laser System. Frontiers in Physics, 2020, 8, .	1.0	22
23	Pr or Ce-doped, fast-response and low-afterglow cross-section-enhanced scintillator with 6Li for down-scattered neutron originated from laser fusion. Journal of Crystal Growth, 2013, 362, 288-290.	0.7	20
24	Integrated simulation of magnetic-field-assist fast ignition laser fusion. Plasma Physics and Controlled Fusion, 2017, 59, 014045.	0.9	20
25	Luminescence properties of Nd3+ and Er3+ doped glasses in the VUV region. Optical Materials, 2013, 35, 1962-1964.	1.7	19
26	Custom-Designed Fast-Response Praseodymium-Doped Lithium 6 Fluoro-Oxide Glass Scintillator With Enhanced Cross-Section for Scattered Neutron Originated From Inertial Confinement Fusion. IEEE Transactions on Nuclear Science, 2010, 57, 1426-1429.	1.2	18
27	Relativistic magnetic reconnection in laser laboratory for testing an emission mechanism of hard-state black hole system. Physical Review E, 2020, 102, 033202.	0.8	17
28	Single shot radiography by a bright source of laser-driven thermal neutrons and x-rays. Applied Physics Express, 2021, 14, 106001.	1.1	17
29	Optical and scintillation properties of Pr-doped Li-glass for neutron detection in inertial confinement fusion process. Journal of Non-Crystalline Solids, 2011, 357, 910-914.	1.5	16
30	Enhancing laser beam performance by interfering intense laser beamlets. Nature Communications, 2019, 10, 2995.	5.8	16
31	Note: Light output enhanced fast response and low afterglow L6i glass scintillator as potential down-scattered neutron diagnostics for inertial confinement fusion. Review of Scientific Instruments, 2010, 81, 106105.	0.6	14
32	Fast-response, Low-Afterglow 4,4'''-Bis[(2-butyloctyl)oxy]-1,1':4',1'':4'',1'''-quarterphenyl Dye-Based Liquid Scintillator for High-Contrast Detection of Laser Fusion-Generated Neutrons. Japanese Journal of Applied Physics, 2011, 50, 080208.	0.8	14
33	Direct evaluation of high neutron density environment using <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mi>n</mml:mi><mml:m reaction induced by laser-driven neutron source. Physical Review C, 2021, 104, .	1.1	14
34	Calibration of imaging plates sensitivity to high energy photons and ions for laser-plasma interaction sources. Journal of Instrumentation, 2021, 16, T02005-T02005.	0.5	13
35	Enhancement of Ablative Rayleigh-Taylor Instability Growth by Thermal Conduction Suppression in a Magnetic Field. Physical Review Letters, 2021, 127, 165001.	2.9	13
36	The photonuclear neutron and gamma-ray backgrounds in the fast ignition experiment. Review of Scientific Instruments, 2012, 83, 10D909.	0.6	12

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37	Custom-designed scintillator for laser fusion diagnostics â€“ Pr3+-doped fluoro-phosphate lithium glass scintillator. Optical Materials, 2010, 32, 1393-1396.	1.7	11
38	Electromagnetic field growth triggering super-ponderomotive electron acceleration during multi-picosecond laser-plasma interaction. Communications Physics, 2019, 2, .	2.0	11
39	Present states and future prospect of fast ignition realization experiment (FIREX) with Gekko and LFEX Lasers at ILE. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 653, 84-88.	0.7	10
40	Production of intense, pulsed, and point-like neutron source from deuterated plastic cavity by mono-directional kilo-joule laser irradiation. Applied Physics Letters, 2017, 111, 233506.	1.5	10
41	The avalanche image intensifier panel for fast neutron radiography by using laser-driven neutron sources. High Energy Density Physics, 2020, 36, 100833.	0.4	10
42	Characterizing a fast-response, low-afterglow liquid scintillator for neutron time-of-flight diagnostics in fast ignition experiments. Review of Scientific Instruments, 2014, 85, 11E126.	0.6	9
43	Quantitative measurement of hard x-ray spectra for high intensity laser produced plasma. Review of Scientific Instruments, 2012, 83, 053502.	0.6	8
44	Direct observation of imploded core heating via fast electrons with super-penetration scheme. Nature Communications, 2019, 10, 5614.	5.8	8
45	Flash X-ray backlight technique using a Fresnel phase zone plate for measuring interfacial instability. High Energy Density Physics, 2020, 36, 100837.	0.4	8
46	Monte Carlo particle collision model for qualitative analysis of neutron energy spectra from anisotropic inertial confinement fusion. High Energy Density Physics, 2020, 36, 100803.	0.4	8
47	Development of Compton X-ray spectrometer for high energy resolution single-shot high-flux hard X-ray spectroscopy. Review of Scientific Instruments, 2016, 87, 043502.	0.6	8
48	Down-scattered neutron imaging detector for areal density measurement of inertial confinement fusion. Review of Scientific Instruments, 2010, 81, 10D303.	0.6	7
49	Development of Multichannel Time-of-Flight Neutron Spectrometer for the Fast Ignition Experiment. Plasma and Fusion Research, 2014, 9, 4404110-4404110.	0.3	7
50	Gamma-ray irradiation effects on the optical properties of bulk ZnO single crystals. Applied Physics Express, 2015, 8, 061101.	1.1	7
51	Numerical analysis of pulsed magnetic field diffusion dynamics in gold cone target. Physics of Plasmas, 2018, 25, 094505.	0.7	7
52	Whispering Gallery Effect in Relativistic Optics. JETP Letters, 2018, 107, 351-354.	0.4	7
53	The conceptual design of 1-ps time resolution neutron detector for fusion reaction history measurement at OMEGA and the National Ignition Facility. Review of Scientific Instruments, 2020, 91, 063304.	0.6	7
54	Fast-Response and Low-Afterglow Cerium-Doped Lithium 6 Fluoro-Oxide Glass Scintillator for Laser Fusion-Originated Down-Scattered Neutron Detection. IEEE Transactions on Nuclear Science, 2012, 59, 2256-2259.	1.2	6

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55	Electronic States of Trivalent Praseodymium Ion Doped in 20Al(PO3)3â€“80LiF Glass. Japanese Journal of Applied Physics, 2013, 52, 062402.	0.8	6
56	Energy distribution of fast electrons accelerated by high intensity laser pulse depending on laser pulse duration. Journal of Physics: Conference Series, 2016, 717, 012102.	0.3	6
57	Development of 4.5 keV monochromatic X-ray radiography using the high-energy, picosecond LFEX laser. Journal of Physics: Conference Series, 2016, 717, 012112.	0.3	6
58	Laser-driven neutron source and nuclear resonance absorption imaging at ILE, Osaka University: review. Applied Optics, 2022, 61, 2398.	0.9	6
59	Optical properties and structure of Pr3+-doped Al(PO3)3â€“LiF glasses as scattered neutron scintillator for nuclear fusion diagnostics. IOP Conference Series: Materials Science and Engineering, 2011, 18, 112006.	0.3	5
60	Quantitative measurement of hard X-ray spectra from laser-driven fast ignition plasma. High Energy Density Physics, 2013, 9, 435-438.	0.4	5
61	Development of multichannel low-energy neutron spectrometer. Review of Scientific Instruments, 2014, 85, 11E125.	0.6	5
62	Accuracy evaluation of a Compton X-ray spectrometer with bremsstrahlung X-rays generated by a 6 MeV electron bunch. Review of Scientific Instruments, 2014, 85, 11D634.	0.6	5
63	Photonuclear reaction based high-energy x-ray spectrometer to cover from 2 MeV to 20 MeV. Review of Scientific Instruments, 2014, 85, 11D629.	0.6	5
64	Plasma mirror implementation on LFEX laser for ion and fast electron fast ignition. Nuclear Fusion, 2017, 57, 126018.	1.6	5
65	Dosimetric calibration of GafChromic HD-V2, MD-V3, and EBT3 films for dose ranges up to 100 kGy. Review of Scientific Instruments, 2021, 92, 063301.	0.6	5
66	An electron/ion spectrometer with the ability of low energy electron measurement for fast ignition experiments. Review of Scientific Instruments, 2014, 85, 11E113.	0.6	4
67	Development of Compton X-Ray Spectrometer for Fast Ignition Experiment. Plasma and Fusion Research, 2014, 9, 4405109-4405109.	0.3	4
68	Progress Towards a Laser Produced Relativistic Electron-Positron Pair Plasma. Journal of Physics: Conference Series, 2016, 688, 012010.	0.3	4
69	Large aperture fast neutron imaging detector with 10-ns time resolution. Proceedings of SPIE, 2017, , .	0.8	4
70	Evaluation of laser-driven ion energies for fusion fast-ignition research. Progress of Theoretical and Experimental Physics, 2017, 2017, .	1.8	4
71	Development of TOF neutron spectrometer for the measurement of degenerated plasma in fast ignition experiment. Journal of Physics: Conference Series, 2008, 112, 032079.	0.3	3
72	Systematic Study on Ce:LuLiF4as a Fast Scintillator Using Storage Ring Free-Electron Lasers. Japanese Journal of Applied Physics, 2010, 49, 122602.	0.8	3

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73	Hot electron spectra in hole-cone shell targets and a new proposal of the target for fast ignition in laser fusion. Physica Scripta, 2014, T161, 014025.	1.2	3
74	Approach to the study of fast electron transport in cylindrically imploded targets. Laser and Particle Beams, 2015, 33, 525-534.	0.4	3
75	Improvement in the heating efficiency of fast ignition inertial confinement fusion through suppression of the preformed plasma. Nuclear Fusion, 2017, 57, 066022.	1.6	3
76	Efficient and Repetitive Neutron Generation by Double-Laser-Pulse Driven Photonuclear Reaction. Plasma and Fusion Research, 2018, 13, 2404009-2404009.	0.3	3
77	A large-aperture high-sensitivity avalanche image intensifier panel. Review of Scientific Instruments, 2018, 89, 101128.	0.6	3
78	A multichannel gated neutron detector with reduced afterpulse for low-yield neutron measurements in intense hard X-ray backgrounds. Review of Scientific Instruments, 2018, 89, 101114.	0.6	3
79	Verification of fast heating of core plasmas produced by counter-illumination of implosion lasers. High Energy Density Physics, 2020, 37, 100890.	0.4	3
80	Development of Tritium Tracer Doped Liquid Fuel Target for Inertial Confinement Fusion at the Gekko XII-LFEX Facility. Fusion Science and Technology, 2020, 76, 464-470.	0.6	3
81	Enhancement of ion energy and flux by the influence of magnetic reconnection in foam targets. High Energy Density Physics, 2020, 36, 100840.	0.4	3
82	Enhanced relativistic electron beams intensity with self-generated resistive magnetic field. High Energy Density Physics, 2020, 36, 100773.	0.4	3
83	Fast-response, Low-Afterglow 4,4'''-Bis[(2-butyloctyl)oxy]-1,1':4',1'':4'',1'''-quarterphenyl Dye-Based Liquid Scintillator for High-Contrast Detection of Laser Fusion-Generated Neutrons. Japanese Journal of Applied Physics, 2011, 50, 080208.	0.8	3
84	Non-destructive inspection of water or high-pressure hydrogen gas in metal pipes by the flash of neutrons and x rays generated by laser. AIP Advances, 2022, 12, 045220.	0.6	3
85	Super-strong magnetic field-dominated ion beam dynamics in focusing plasma devices. Scientific Reports, 2022, 12, 6876.	1.6	3
86	Fast response neutron scintillation detector for FIRE-X. Journal of Physics: Conference Series, 2008, 112, 032082.	0.3	2
87	Hot Electron Spectra in Plain, Cone and Integrated Targets for FIREX-I using Electron Spectrometer. Plasma and Fusion Research, 2013, 8, 2404125-2404125.	0.3	2
88	Implosion and heating experiments of fast ignition targets by Gekko-XII and LFEX lasers. EPJ Web of Conferences, 2013, 59, 01008.	0.1	2
89	Response measurement of single-crystal chemical vapor deposition diamond radiation detector for intense X-rays aiming at neutron bang-time and neutron burn-history measurement on an inertial confinement fusion with fast ignition. Review of Scientific Instruments, 2015, 86, 053503.	0.6	2
90	Electron transport estimated from electron spectra using electron spectrometer in LFEX laser target experiments. Journal of Physics: Conference Series, 2016, 717, 012043.	0.3	2

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91	Progress toward a unified kJ-machine CANDY. Journal of Physics: Conference Series, 2016, 688, 012049.	0.3	2
92	Direct heating of compressed core by ultra-intense laser. Journal of Physics: Conference Series, 2016, 717, 012055.	0.3	2
93	Assessing infrared intensity using the evaporation rate of liquid hydrogen inside a cryogenic integrating sphere for laser fusion targets. Review of Scientific Instruments, 2017, 88, 075103.	0.6	2
94	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.	0.3	2
95	Nanosecond alpha-ray response and gamma-ray radiation resistance of a hydrothermal-grown bulk ZnO single crystal. Journal of Crystal Growth, 2021, 570, 126240.	0.7	2
96	Experimental Investigation of Voltage Generation Mechanism of Laser-Driven Coil. Journal of the Physical Society of Japan, 2022, 91, .	0.7	2
97	A scattered-neutron detector for areal density measurement. Journal of Physics: Conference Series, 2010, 244, 032041.	0.3	1
98	Multichannel down-scattered neutron detector for areal density measurement. EPJ Web of Conferences, 2013, 59, 13011.	0.1	1
99	The Development of the Neutron Detector for the Fast Ignition Experiment by using LFEX and Gekko XII Facility. Plasma and Fusion Research, 2014, 9, 4404105-4404105.	0.3	1
100	The Neutron Imaging Diagnostics and Reconstructing Technique for Fast Ignition. Plasma and Fusion Research, 2014, 9, 4404108-4404108.	0.3	1
101	Quantitative KÎ± line spectroscopy for energytransport in fast ignition plasma driven with LFEX PW laser. High Energy Density Physics, 2015, 15, 78-81.	0.4	1
102	Confirmation of hot electron preheat with a Cu foam sphere on GEKKO-LFEX laser facility. Physics of Plasmas, 2017, 24, 112709.	0.7	1
103	Initiation of THz Spherical Wave of Electron Bunch near Metallic Boundary. , 2021, , .		1
104	Direct heating of a laser-imploded core using ultraintense laser LFEX. Nuclear Fusion, 2017, 57, 076030.	1.6	1
105	Simple Analysis of the Laser-to-Core Energy Coupling Efficiency with Magnetized Fast Isochoric Laser Heating. Plasma and Fusion Research, 2019, 14, 3404138-3404138.	0.3	1
106	Preliminary Cryogenic Layering by the Infrared Heating Method Modified with Cone Temperature Control for the Polystyrene Shell FIREX Target. Plasma and Fusion Research, 2021, 16, 1404099-1404099.	0.3	1
107	Thermal neutron fluence measurement by Cadmium differential method at laser-driven neutron source. Journal of Physics G: Nuclear and Particle Physics, 0, , .	1.4	1
108	Estimation of a Plasma Mirror Reflectivity of LFEX Laser and Relevant Results Using Electron Energy Spectrometers. Plasma and Fusion Research, 2022, 17, 2404084-2404084.	0.3	1

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109	Pr doped Li-6 glass scintillator for Inertial Confinement Fusion neutron diagnostics. , 2010, , .		0
110	Imaging of Radiation Accidents and Radioactive Contamination Using Scintillators. , 0, , .		0
111	Development of Glass Scintillator Material for Measurement of Scattered Neutron Originated from Inertial Confi nement Fusion. The Review of Laser Engineering, 2011, 39, 312-318.	0.0	0
112	Development of time-of-flight neutron detector with fast-decay and low-afterglow scintillator for fast ignition experiment. EPJ Web of Conferences, 2013, 59, 13012.	0.1	0
113	Energy Transportation by MeV Hot Electrons in Fast Ignition Plasma Driven with LFEX PW Laser. Plasma and Fusion Research, 2014, 9, 1404118-1404118.	0.3	0
114	Development of the High Energy Bremsstrahlung X-Ray Spectrometer by Using (<i>Î³</i>, n) Reaction. Plasma and Fusion Research, 2014, 9, 4404112-4404112.	0.3	0
115	Hot electron spectra on advanced targets in FIREX. Journal of Physics: Conference Series, 2016, 688, 012083.	0.3	0
116	Tritium-doping enhancement of polystyrene by ultraviolet laser and hydrogen plasma irradiation for laser fusion experiments. Fusion Engineering and Design, 2016, 112, 269-273.	1.0	0
117	The diagnostics of the energy coupling efficiency in the Fast Ignition integrated experiment. Journal of Physics: Conference Series, 2016, 688, 012004.	0.3	0
118	Quantitative KÎ± line spectroscopy for energy transport in ultra-intense laser plasma interaction. Journal of Physics: Conference Series, 2016, 688, 012132.	0.3	0
119	3 Ã— 10⁸D-D Neutron Generation by High-Intensity Laser Irradiation onto the Inner Surface of Spherical CD Shells. Plasma and Fusion Research, 2018, 13, 2401028-2401028.	0.3	0
120	Development of single-shot frequency-resolved optical gating for characterizing the instantaneous intensity and phase of LFEX laser pulses. High Energy Density Physics, 2020, 37, 100855.	0.4	0
121	Investigation of plasma states formed under the interaction of high-power laser pulses with wire-shape Alâ€"Cu target. Journal of Physics: Conference Series, 2021, 1787, 012028.	0.3	0
122	Lorentz contraction of an electric field around relativistic electron beams. , 2021, , .		0
123	Study of the spatio-temporal profile diagnostics for relativistic picosecond electron bunches by electro-optic sampling. , 2021, , .		0
124	Characterization of Ce:LuLiF<inf>4</inf> as fast scintillator using storage ring free-electron lasers. , 2008, , .		0
125	Neutron Generation by Laser-Driven Photonuclear Reaction. The Review of Laser Engineering, 2015, 43, 98.	0.0	0
126	Recent Development of Neutron Detectors for Pulsed Compact Neutron Sources. The Review of Laser Engineering, 2018, 46, 634.	0.0	0

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127	Efficient Fast Heating of Dense Core Plasma by Laser-Driven Strong Magnetic Field. The Review of Laser Engineering, 2019, 47, 536.	0.0	0
128	Study of the measurement for electron bunches and the irradiation effect by femtosecond electro-optic sampling. , 2020, , .		0