Hiroaki Nishimura

List of Publications by Year
in descending order

103 papers	1,517 citations	304368 22 h-index	329751 37 g-index
104 all docs	104 docs citations	104 times ranked	948 citing authors

#	Article	IF	Citations
1	Opacity Effect on Extreme Ultraviolet Radiation from Laser-Produced Tin Plasmas. Physical Review Letters, 2005, 95, 235004.	2.9	146
2	Plasma physics and radiation hydrodynamics in developing an extreme ultraviolet light source for lithography. Physics of Plasmas, 2008, 15, .	0.7	126
3	X-ray astronomy in the laboratory with a miniature compact object produced by laser-driven implosion. Nature Physics, 2009, 5, 821-825.	6.5	113
4	Pure-tin microdroplets irradiated with double laser pulses for efficient and minimum-mass extreme-ultraviolet light source production. Applied Physics Letters, 2008, 92, .	1.5	85
5	Properties of ion debris emitted from laser-produced mass-limited tin plasmas for extreme ultraviolet light source applications. Applied Physics Letters, 2005, 87, 241503.	1.5	82
6	Magnetized fast isochoric laser heating for efficient creation of ultra-high-energy-density states. Nature Communications, 2018, 9, 3937.	5.8	75
7	Optimum laser pulse duration for efficient extreme ultraviolet light generation from laser-produced tin plasmas. Applied Physics Letters, 2006, 89, 151501.	1.5	65
8	Low-density tin targets for efficient extreme ultraviolet light emission from laser-produced plasmas. Applied Physics Letters, 2006, 88, 161501.	1.5	63
9	Hydrothermal method grown large-sized zinc oxide single crystal as fast scintillator for future extreme ultraviolet lithography. Applied Physics Letters, 2007, 91, 231117.	1.5	58
10	Characterization of extreme ultraviolet emission using the fourth harmonic of a Nd:YAG laser. Applied Physics Letters, 2005, 86, 181107.	1.5	41
11	Line analysis of EUV Spectra from Molybdenum and Tungsten Injected with Impurity Pellets in LHD. Plasma and Fusion Research, 2007, 2, S1060-S1060.	0.3	37
12	Preparation of Low-Density Macrocellular Tin Dioxide Foam with Variable Window Size. Chemistry of Materials, 2005, 17, 1115-1122.	3.2	33
13	Titanium dioxide nanofiber-cotton targets for efficient multi-keV x-ray generation. Applied Physics Letters, 2008, 93, .	1.5	32
14	Absolute evaluation of out-of-band radiation from laser-produced tin plasmas for extreme ultraviolet lithography. Applied Physics Letters, 2008, 92, .	1.5	31
15	Fast ion acceleration in a foil plasma heated by a multi-picosecond high intensity laser. Physics of Plasmas, 2017, 24, .	0.7	29
16	Experimental evidence and theoretical analysis of photoionized plasma under x-ray radiation produced by an intense laser. Physics of Plasmas, 2008, 15, .	0.7	28
17	Temperature dependence of scintillation properties for a hydrothermal-method-grown zinc oxide crystal evaluated by nickel-like silver laser pulses. Journal of the Optical Society of America B: Optical Physics, 2008, 25, B118.	0.9	27
18	Angular distribution control of extreme ultraviolet radiation from laser-produced plasma by manipulating the nanostructure of low-density SnO2 targets. Applied Physics Letters, 2006, 88, 094102.	1.5	26

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19	Hydrothermal-method-grown ZnO single crystal as fast EUV scintillator for future lithography. Journal of Crystal Growth, 2009, 311, 875-877.	0.7	26
20	Neutral Debris Mitigation in Laser Produced Extreme Ultraviolet Light Source by the Use of Minimum-Mass Tin Target. Applied Physics Express, 2008, 1, 056001.	1.1	23
21	Heating efficiency evaluation with mimicking plasma conditions of integrated fast-ignition experiment. Physical Review E, 2015, 91, 063102.	0.8	23
22	High-Intensity Neutron Generation via Laser-Driven Photonuclear Reaction. Plasma and Fusion Research, 2015, 10, 2404003-2404003.	0.3	23
23	Integral cross section with magnetic sublevels and polarization degree of He-like Cl ions by electron impact. Physical Review A, 2007, 75, .	1.0	22
24	Impulse and mass removal rate of aluminum target by nanosecond laser ablation in a wide range of ambient pressure. Journal of Applied Physics, 2017, 122, .	1.1	17
25	Elastic- and inelastic-scattering collision strengths between magnetic sublevels for electron impact on He-like Cu ions. Physical Review A, 2007, 75, .	1.0	14
26	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>[illegible]/mml:m[illegible]<mml:mo reaction induced by laser-driven neutron source. Physical Review C, 2021, 104, .	1.1	14
27	Correlation between laser absorption and radiation conversion efficiency in laser produced tin plasma. Applied Physics Letters, 2015, 107, 121103.	1.5	13
28	Control of unsteady laser-produced plasma-flow with a multiple-coil magnetic nozzle. Scientific Reports, 2017, 7, 8910.	1.6	13
29	Density and x-ray emission profile relationships in highly ionized high-<i>Z</i> laser-produced plasmas. Applied Physics Letters, 2015, 106, .	1.5	11
30	Electromagnetic field growth triggering super-ponderomotive electron acceleration during multi-picosecond laser-plasma interaction. Communications Physics, 2019, 2, .	2.0	11
31	X-ray backlight measurement of preformed plasma by kJ-class petawatt LFEX laser. Journal of Applied Physics, 2012, 112, 063301.	1.1	10
32	Characterization of Extreme UV Radiation from Laser Produced Spherical Tin Plasmas for Use in Lithography. Journal of Plasma and Fusion Research, 2004, 80, 325-330.	0.4	10
33	Properties of EUV and particle generations from laser-irradiated solid- and low-density tin targets. , 2005, , .		9
34	Dry Tin Dioxide Hollow Microshells and Extreme Ultraviolet Radiation Induced by CO₂ Laser Illumination. Langmuir, 2008, 24, 10402-10406.	1.6	9
35	Potential High-Spatial Resolution In-Situ Imaging of Soft X-Ray Laser Pulses With ZnO Crystal. IEEE Transactions on Nuclear Science, 2012, 59, 2294-2297.	1.2	8
36	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

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37	Fine Structures of Laser-Driven Punched-Out Tin Fuels Observed with Extreme Ultraviolet Backlight Imaging. Japanese Journal of Applied Physics, 2008, 47, 293-296.	0.8	7
38	Oriented and lowâ€density tin dioxide film by solâ€“gel mineralizing tinâ€contained hydroxypropyl cellulose lyotropic liquid crystal for laserâ€induced extreme ultraviolet emission. Journal of Polymer Science Part A, 2009, 47, 4566-4576.	2.5	7
39	Condition of MeV Electron Bunch Generated from Argon Gas-Jet Target in the Self-Modulated Laser Wakefield Regime. Journal of the Physical Society of Japan, 2011, 80, 105001.	0.7	7
40	Improvement of Absorption and Hydrodynamic Efficiency by Using a Double-Foil Target with a Pinhole. Journal of the Physical Society of Japan, 1982, 51, 280-285.	0.7	6
41	Tin-Polymer Composite on a Rotating Drum as a High Repetition Rate Laser Target for Extreme Ultraviolet Generation. Fusion Science and Technology, 2006, 49, 691-694.	0.6	6
42	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
43	Spectroscopic observation of ablation plasma generated with a laser-driven extreme ultraviolet light source. Applied Physics B: Lasers and Optics, 2015, 119, 421-425.	1.1	6
44	High-space resolution imaging plate analysis of extreme ultraviolet (EUV) light from tin laser-produced plasmas. Review of Scientific Instruments, 2017, 88, 033506.	0.6	6
45	Properties of EUV emissions from laser-produced tin plasmas. , 2004, 5374, 912.		5
46	Characteristic measurements of silicon dioxide aerogel plasmas generated in a Planckian radiation environment. Physics of Plasmas, 2010, 17, .	0.7	5
47	Evaluation of Soft X-ray Laser with In situ Imaging Device of High Spatial Resolution ZnO Scintillator. Japanese Journal of Applied Physics, 2011, 50, 122202.	0.8	5
48	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
49	Far-infrared-light shadowgraphy for high extraction efficiency of extreme ultraviolet light from a CO2-laser-generated tin plasma. Applied Physics Letters, 2016, 109, 051104.	1.5	5
50	The Measurement of Plasma Structure in a Magnetic Thrust Chamber. Plasma and Fusion Research, 2016, 11, 3406012-3406012.	0.3	5
51	Evaluation of Soft X-ray Laser withIn situImaging Device of High Spatial Resolution ZnO Scintillator. Japanese Journal of Applied Physics, 2011, 50, 122202.	0.8	5
52	Plasma calorimeter for absorption measurement of laser produced plasma. Review of Scientific Instruments, 1985, 56, 1867-1869.	0.6	4
53	Implosion experiments of gas-filled plastic-shell targets with [ell] = 1 drive nonuniformity at the Gekko-XII glass laser. Laser and Particle Beams, 2001, 19, 267-284.	0.4	4
54	Absolute calibration of extreme ultraviolet optical components with an x-ray-induced fluorescence source. Review of Scientific Instruments, 2005, 76, 113109.	0.6	4

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55	Spatial Resolution Evaluation of ZnO Scintillator as an In-situ Imaging Device in EUV Region. IEEE Transactions on Nuclear Science, 2014, 61, 462-466.	1.2	4
56	Dependence of EUV emission properties on laser wavelength. , 2004, , .		3
57	Development of Tin Droplet Target for 13.5 nm Lithography. Plasma and Fusion Research, 2006, 1, 055-055.	0.3	3
58	Fabrication of the hollow SnO2 nanoparticles contained spheres as extreme ultraviolet (EUV) target. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 358, 88-92.	2.3	3
59	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
60	Efficient and Repetitive Neutron Generation by Double-Laser-Pulse Driven Photonuclear Reaction. Plasma and Fusion Research, 2018, 13, 2404009-2404009.	0.3	3
61	Temperature-Dependent EUV Spectra of Xenon Plasmas Observed in the Compact Helical System. Journal of Plasma and Fusion Research, 2005, 81, 480-481.	0.4	3
62	Soft X ray radiation confinement in laser fusion.. KakuyÅ«gÅ•KenkyÅ«, 1990, 63, 219-234.	0.1	3
63	X-Ray Polarization Spectroscopy of HeÎ± Line Emission for Diagnosis of the Anisotropy of Hot Electrons. Plasma and Fusion Research, 2007, 2, 013-013.	0.3	3
64	Laser Production of Extreme Ultraviolet Light Source for the Next Generation Lithography Application. Plasma and Fusion Research, 2009, 4, 048-048.	0.3	3
65	Spectral Sensitivity Calibration of a Back-Illuminated CCD Using a Laser-Plasma X-Ray Source.. The Review of Laser Engineering, 1998, 26, 700-704.	0.0	3
66	Development of Extreme-Ultraviolet Light Source by Laser-Produced Plasma. The Review of Laser Engineering, 2008, 36, 1125-1128.	0.0	3
67	Development of â€œPunching-Out Targetâ€•to Generate Extreme Ultraviolet (EUV) Light. Fusion Science and Technology, 2007, 51, 769-771.	0.6	2
68	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
69	Thomson Scattering Measurement of Laser-Produced Plasma in a Magnetic Thrust Chamber. Plasma and Fusion Research, 2018, 13, 1306016-1306016.	0.3	2
70	Two-Facing Irradiation of Laser Pulses to Suppress Position Shift of Expanded Tin Microsphere for Extreme Ultraviolet Light Source. Applied Physics Express, 2011, 4, 056201.	1.1	2
71	Laser Produced Plasma for EUV Light Source For Lithography. The Review of Laser Engineering, 2004, 32, 330-336.	0.0	2
72	Development of focused laser plasma x-ray beam for radiobiological applications. , 2009, , .		1

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73	Monochromatic X-Ray Emission from Laser Produced Plasma with A Clean Ultra-Short Laser Pulse. The Review of Laser Engineering, 2010, 38, 698-701.	0.0	1
74	Application of Laser-Driven Monochromatic X-Ray to Radiobiology. The Review of Laser Engineering, 2010, 38, 981-986.	0.0	1
75	Comparative and quantitative study of neutral debris emanated from tin plasmas produced by neodymium-doped yttrium-aluminum-garnet and carbon dioxide laser pulses. Applied Physics Letters, 2010, 97, 111502.	1.5	1
76	Effect of Nd:YAG Laser Energy on Multilayer Hollow Nanofiber Target's Extreme Ultraviolet Conversion Efficiency. Journal of Macromolecular Science - Physics, 2011, 50, 1761-1770.	0.4	1
77	A laser-plasmaâ€"produced soft X-ray laser at 89 eV generates DNA double-strand breaks in human cancer cells. Journal of Radiation Research, 2015, 56, 633-638.	0.8	1
78	Monochromatic X-Ray Sampling Imager for Laser-Imploded Core Plasma Observation with Highly Spatial, Temporal, and Spectral Resolutions. Plasma and Fusion Research, 2007, 2, S1017-S1017.	0.3	1
79	Advanced Target Design for the FIREX-I Project. Plasma and Fusion Research, 2009, 4, S1001-S1001.	0.3	1
80	Progress of Advanced Fusion Energy Studies with Ultra-Intense Lasers.. Journal of Plasma and Fusion Research, 2002, 78, 792-798.	0.4	1
81	Laser Fusion Target Alignment by HARTMMANN Mask Method. The Review of Laser Engineering, 1978, 6, 192-199.	0.0	1
82	Low density targets for laser-produced-plasma (LPP) extreme ultraviolet light source with high-CE and toward high-repletion supply. , 2008, , .		0
83	Improvements of Signal-to-noise Ratio Utilizing Penumbral Imaging with M-sequences Aperture and Its Heuristic Scheme. , 2009, , .		0
84	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
85	Note: A Laue crystal imager for high energy quasi-monochromatic x-ray. Review of Scientific Instruments, 2018, 89, 096106.	0.6	0
86	High Power Laser Astrophysics. The Review of Laser Engineering, 2001, 29, 82-83.	0.0	0
87	Time- and Space-Resolved Spectroscopic Imaging Diagnostics of Laser-Produced Plasmas X-Ray Monochromatic Framing Imager and Observation of Dynamical Temperature-Density Profiles of Laser Imploded Core Plasmas. Journal of Plasma and Fusion Research, 2003, 79, 355-361.	0.4	0
88	Suppression of Rayleigh-Taylor Instability Using High-Z Doped Plastic Targets for Inertial Fusion Energy. Journal of Plasma and Fusion Research, 2004, 80, 597-604.	0.4	0
89	Features of Radiation Hydrodynamics in LPP-EUV Light Source Plasmas. The Review of Laser Engineering, 2004, 32, 769-778.	0.0	0
90	Present Status and Future Prospect of Highly Bright Radiation Sources by Laser-Produced Plasma. IEEJ Transactions on Fundamentals and Materials, 2006, 126, 1195-1198.	0.2	0

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91	Atomic Model and Optimization of EUV Light Source. The Review of Laser Engineering, 2008, 36, 690-699.	0.0	0
92	Basic Research on EUV Source Development. The Review of Laser Engineering, 2008, 36, 700-707.	0.0	0
93	Extreme Ultraviolet (EUV) Radiation from Punched-Out Target. The Review of Laser Engineering, 2008, 36, 736-741.	0.0	0
94	ZnO as Fast Scintillators Evaluated with Ni-like Ag Laser. The Review of Laser Engineering, 2008, 36, 1028-1030.	0.0	0
95	Time-Domain Spectroscopy of Solid by using EUV Laser. The Review of Laser Engineering, 2008, 36, 77-78.	0.0	0
96	Single-Shot Focal Spot Image of EUV Laser Using a ZnO Scintillator. , 2009, , .		0
97	Development of Laser Plasma X-ray Microbeam Irradiation System and Radiation Biological Application. IEEJ Transactions on Electronics, Information and Systems, 2010, 130, 1800-1805.	0.1	0
98	Electron Beam Controlled CO₂ Laser. The Review of Laser Engineering, 1975, 3, 96-103.	0.0	0
99	Report on CLEO/IQEC'86 II. The Review of Laser Engineering, 1986, 14, 717-720.	0.0	0
100	Survey of the Laser Fusion. The Review of Laser Engineering, 1986, 14, 1003-1017.	0.0	0
101	Indirect-drive Implosion by Lasers. KakuyÅ«gÅ•KenkyÅ«, 1987, 58, 255-264.	0.1	0
102	Preface to Special Issue on Laser Driven Neutron Sources and Applications. The Review of Laser Engineering, 2015, 43, 70.	0.0	0
103	Neutron Generation by Laser-Driven Photonuclear Reaction. The Review of Laser Engineering, 2015, 43, 98.	0.0	0