Hideaki Takabe

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101 papers	2,388 citations	24 h-index	47 g-index
112 ext. papers	2,580 ext. citations	3 avg, IF	4.25 L-index

#	Paper	IF	Citations
101	Modeling Astrophysical Phenomena in the Laboratory with Intense Lasers. *Science*, **1999**, 284, 1488-1493	33.3	335
100	Observation of magnetic field generation via the Weibel instability in interpenetrating plasma flows. *Nature Physics*, **2015**, 11, 173-176	16.2	191
99	Scalings of implosion experiments for high neutron yield. *Physics of Fluids*, **1988**, 31, 2884		152
98	Nonrelativistic Collisionless Shocks in Unmagnetized Electron-Ion Plasmas. *Astrophysical Journal*, **2008**, 681, L93-L96	4.7	121
97	Time evolution of collisionless shock in counterstreaming laser-produced plasmas. *Physical Review Letters*, **2011**, 106, 175002	7.4	114
96	Self-organized electromagnetic field structures in laser-produced counter-streaming plasmas. *Nature Physics*, **2012**, 8, 809-812	16.2	102
95	X-ray astronomy in the laboratory with a miniature compact object produced by laser-driven implosion. *Nature Physics*, **2009**, 5, 821-825	16.2	92
94	Characterizing counter-streaming interpenetrating plasmas relevant to astrophysical collisionless shocksa). *Physics of Plasmas*, **2012**, 19, 056501	2.1	90
93	Studying astrophysical collisionless shocks with counterstreaming plasmas from high power lasers. *High Energy Density Physics*, **2012**, 8, 38-45	1.2	74
92	Electrostatic and electromagnetic instabilities associated with electrostatic shocks: Two-dimensional particle-in-cell simulation. *Physics of Plasmas*, **2010**, 17, 032114	2.1	74
91	Numerical study of pair creation by ultraintense lasers. *Physics of Plasmas*, **2002**, 9, 1505-1512	2.1	74
90	High-Mach number collisionless shock and photo-ionized non-LTE plasma for laboratory astrophysics with intense lasers. *Plasma Physics and Controlled Fusion*, **2008**, 50, 124057	2	53
89	Collisionless shock generation in high-speed counterstreaming plasma flows by a high-power laser. *Physics of Plasmas*, **2010**, 17, 122702	2.1	48
88	NONRELATIVISTIC COLLISIONLESS SHOCKS IN WEAKLY MAGNETIZED ELECTRON-ION PLASMAS: TWO-DIMENSIONAL PARTICLE-IN-CELL SIMULATION OF PERPENDICULAR SHOCK. *Astrophysical Journal*, **2010**, 721, 828-842	4.7	47
87	Collisionless shock experiments with lasers and observation of Weibel instabilitiesa). *Physics of Plasmas*, **2015**, 22, 056311	2.1	43
86	Transition from Collisional to Collisionless Regimes in Interpenetrating Plasma Flows on the National Ignition Facility. *Physical Review Letters*, **2017**, 118, 185003	7.4	42
85	Study of indirectly driven implosion by x-ray spectroscopic measurements. *Physics of Plasmas*, **1995**, 2, 2063-2074	2.1	39

84	Measured laser fusion gains reproduced by self-similar volume compression and volume ignition for NIF conditions. *Journal of Plasma Physics*, **1998**, 60, 743-760	2.7	36
83	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
82	Visualizing electromagnetic fields in laser-produced counter-streaming plasma experiments for collisionless shock laboratory astrophysicsa). *Physics of Plasmas*, **2013**, 20, 056313	2.1	32
81	Kelvin-Helmholtz turbulence associated with collisionless shocks in laser produced plasmas. *Physical Review Letters*, **2012**, 108, 195004	7.4	31
80	Soft x-ray spectra of highly ionized elements with atomic numbers ranging from 57 to 82 produced by compact lasers. *Journal of Applied Physics*, **1994**, 75, 1923-1930	2.5	29
79	Atomic Number Scaling of the Nickel-Like Soft X-Ray Lasers. *International Journal of Modern Physics B*, **1997**, 11, 945-990	1.1	28
78	Experimental evidence and theoretical analysis of photoionized plasma under x-ray radiation produced by an intense laser. *Physics of Plasmas*, **2008**, 15, 073108	2.1	25
77	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
76	Magnetic field production via the Weibel instability in interpenetrating plasma flows. *Physics of Plasmas*, **2017**, 24, 041410	2.1	21
75	Thomson scattering measurement of a shock in laser-produced counter-streaming plasmas. *Physics of Plasmas*, **2013**, 20, 092115	2.1	21
74	Pusherless implosion, pulse tailoring and ignition scaling law for laser fusion. *Laser and Particle Beams*, **1989**, 7, 249-258	0.9	20
73	JET FORMATION IN COUNTERSTREAMING COLLISIONLESS PLASMAS. *Astrophysical Journal*, **2009**, 707, L137-L141	4.7	19
72	The scalability of the accretion column in magnetic cataclysmic variables: the POLAR project. *Astrophysics and Space Science*, **2011**, 336, 81-85	1.6	16
71	Monochromatic x-ray imaging with bent crystals for laser fusion research. *Review of Scientific Instruments*, **2001**, 72, 744-747	1.7	15
70	Single spatial mode experiments on initial laser imprint on direct-driven planar targets. *Physics of Plasmas*, **2002**, 9, 1734-1744	2.1	15
69	Cryogenic deuterium target experiments with the GEKKO XII, green laser system. *Physics of Plasmas*, **1995**, 2, 2495-2503	2.1	15
68	Requirement of uniformity for fuel ignition and uniformity in high neutron yield implosion. *Laser and Particle Beams*, **1989**, 7, 175-187	0.9	14
67	Effects of Thermal Conduction and Compressibility on Rayleigh-Taylor Instability. *Journal of the Physical Society of Japan*, **1980**, 48, 1793-1794	1.5	14

66	Collisionless Shocks Driven by Supersonic Plasma Flows with Self-Generated Magnetic Fields. *Physical Review Letters*, **2019**, 123, 055002	7.4	13
65	Laboratory simulation of the collision of supernova 1987A with its circumstellar ring nebula. *Plasma Physics Reports*, **2001**, 27, 843-851	1.2	13
64	Maximizing magnetic field generation in high power laser-solid interactions. *High Power Laser Science and Engineering*, **2019**, 7,	4.3	12
63	Highly radiative shock experiments driven by GEKKO XII. *Astrophysics and Space Science*, **2011**, 336, 213-218	1.6	11
62	Hydrodynamic Instability of Ionization Front in HII Regions: From Linear to Nonlinear Evolution. *Astrophysics and Space Science*, **2005**, 298, 197-202	1.6	11
61	Imprint reduction in a plasma layer preformed with x-ray irradiation. *Physics of Plasmas*, **2002**, 9, 1381-1391	2.1	11
60	Kinetic effects on the electron thermal transport in ignition target design. *Physics of Plasmas*, **1996**, 3, 3420-3424	2.1	11
59	Collisionless electrostatic shock generation using high-energy laser systems. *Advances in Physics: X*, **2016**, 1, 425-443	5.1	10
58	Ionization and reflux dependence of magnetic instability generation and probing inside laser-irradiated solid thin foils. *Physics of Plasmas*, **2017**, 24, 103115	2.1	10
57	Experimental results to study astrophysical plasma jets using Intense Lasers. *Astrophysics and Space Science*, **2009**, 322, 25-29	1.6	10
56	Formation of density inhomogeneity in laser produced plasmas for a test bed of magnetic field amplification in supernova remnants. *Astrophysics and Space Science*, **2011**, 336, 269-272	1.6	9
55	One- and two-dimensional fast x-ray imaging of laser-driven implosion dynamics with x-ray streak cameras. *Review of Scientific Instruments*, **1997**, 68, 828-830	1.7	9
54	Time-resolved, two-dimensional electron-temperature distribution of laser-imploded core plasmas. *Review of Scientific Instruments*, **1997**, 68, 820-823	1.7	9
53	Spectrum modulation of relativistic electrons by laser wakefield. *Applied Physics Letters*, **2008**, 93, 081501	3.4	8
52	Line profile modeling for non-LTE partially ionized plasmas based on average atom model with l-splitting. *Laser and Particle Beams*, **1993**, 11, 81-87	0.9	8
51	A jet production experiment using the high-repetition rate Astra laser. *Astrophysics and Space Science*, **2009**, 322, 31-35	1.6	7
50	Preliminary Studies of Direct Energy Conversion in a D-3He Inertial Confinement Fusion Reactor. *Fusion Science and Technology*, **1992**, 22, 56-65		7
49	Resonant Excitation of High Amplitude Oscillations and Hydrodynamic Wave Breaking in a Streaming Cold Plasma. *Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences*, **1982**, 37, 208-218	1.4	7

48	Recent progress of laboratory astrophysics with intense lasers. *High Power Laser Science and Engineering*,1-38	4.3	7
47	Radiation reaction in the interaction of ultraintense laser with matter and gamma ray source. *Physics of Plasmas*, **2016**, 23, 053117	2.1	7
46	The suppression of radiation reaction and laser field depletion in laser-electron beam interaction. *Physics of Plasmas*, **2018**, 25, 033113	2.1	5
45	Characteristic measurements of silicon dioxide aerogel plasmas generated in a Planckian radiation environment. *Physics of Plasmas*, **2010**, 17, 012701	2.1	5
44	Numerical Simulation of Non-spherical Implosion Related to Fast Ignition. *AIP Conference Proceedings*, **2003**,	0	5
43	Eagle Nebula Pillars: From Models to Observations. *Astrophysics and Space Science*, **2005**, 298, 177-181	1.6	5
42	Properties of an exploding foil neon-like germanium soft X-ray laser. *Laser and Particle Beams*, **1993** , 11, 109-117	0.9	5
41	Design of Laser Fusion Reactordriven by Laser-Diode-Pumped Solid State Laser. *Fusion Science and Technology*, **1992**, 21, 1460-1464		5
40	Proton imaging of an electrostatic field structure formed in laser-produced counter-streaming plasmas. *Journal of Physics: Conference Series*, **2016**, 688, 012071	0.3	5
39	Characterization of electrostatic shock in laser-produced optically-thin plasma flows using optical diagnostics. *Physics of Plasmas*, **2017**, 24, 072701	2.1	4
38	Effects of neutron heating on ignition and energy gain of laser-imploded D-T pellets. *Laser and Particle Beams*, **1997**, 15, 259-276	0.9	4
37	Nonlinear Dynamics of Ionization Fronts in HII Regions. *Astrophysics and Space Science*, **2007**, 307, 183-186	1.6	4
36	Numerical simulation of implosion and burn of DⅢ ignitor/D3He fuel pellet for D3He inertial confinement fusion reactor. *Laser and Particle Beams*, **1993**, 11, 137-147	0.9	4
35	Theory of efficient shell implosions. *Laser and Particle Beams*, **1989**, 7, 189-205	0.9	4
34	Theoretical studies on electron and radiation preheatings. *Laser and Particle Beams*, **1989**, 7, 487-493	0.9	4
33	Electrostatic Field Generation and Hot Electron Reduction in a Laser Produced Plasma. *Journal of the Physical Society of Japan*, **1982**, 51, 2293-2299	1.5	4
32	Recent Laboratory Astrophysics Experiments at LULI. *Plasma and Fusion Research*, **2009**, 4, 044-044	0.5	4
31	Generation of counter-streaming plasmas for collisionless shock experiment. *High Energy Density Physics*, **2017**, 23, 207-211	1.2	3

30	Collisionless Shock Wave Generation in Counter-Streaming Plasmas Using Gekko XII HIPER Laser. *Plasma and Fusion Research*, **2011**, 6, 2404057-2404057	0.5	3
29	Optical pyrometer system for collisionless shock experiments in high-power laser-produced plasmas. *Review of Scientific Instruments*, **2012**, 83, 10D514	1.7	3
28	Laser Fusion Research at Ile Osaka University. *Fusion Science and Technology*, **1996**, 30, 625-633		3
27	Relativistic Plasma Physics. Relativistic Motion of Charged Particles in Ultra-Intense Laser Fields.. *Journal of Plasma and Fusion Research*, **2002**, 78, 341-346		3
26	Optimizing the energies conversion in laser-electron beam collision. *Physics of Plasmas*, **2019**, 26, 033102	2.1	2
25	Prospect for Multiple Time and Spatial Scale Simulation Research in Astrophysical Plasma Phenomena: Grand Challenge for Studying the History of Universe from the Dark Ages to the Solar System. *Journal of Plasma and Fusion Research*, **2003**, 79, 504-515		2
24	Soft X ray radiation confinement in laser fusion.. *Kakuyg□Kenky*, **1990**, 63, 219-234		2
23	Can X-Ray Lasers Exist in Astrophysical Objects ?. *Publication of the Astronomical Society of Japan*, **2011**, 63, 727-733	3.2	1
22	Calculation of Photoionized Plasmas with a Detailed-Configuration-Accounting Atomic Model. *Journal of the Physical Society of Japan*, **2009**, 78, 064301	1.5	1
21	Non-LTE atomic modeling for laser-produced plasmas. *Laser and Particle Beams*, **1993**, 11, 119-126	0.9	1
20	Radiation-driven cannonball targets for high-convergence implosions. *Laser and Particle Beams*, **1993**, 11, 89-96	0.9	1
19	Recent results from experiments on x-ray confining cavities (abstract). *Review of Scientific Instruments*, **1990**, 61, 2813-2813	1.7	1
18	Ablation and Compression Mechanism in Laser Fusion Plasma.. *The Review of Laser Engineering*, **1979**, 7, 394-400	0	1
17	Fast Ignitor Research with Use of Ultra-Intense Laser System.. *Journal of Plasma and Fusion Research*, **1999**, 75, 452-458		1
16	Conference on Computational Physics 2012 **2013**, 02, 12-13		
15	Laboratory Astrophysics Experiment Using High-Power Lasers. *The Review of Laser Engineering*, **2011**, 39, 5-11	0	
14	X-ray Line and Recombination Emission in the Afterglow of Grb. *Astrophysics and Space Science*, **2005**, 298, 323-326	1.6	
13	Internal structure of a partially ionized heavy ion. Isolated ion model. *Laser and Particle Beams*, **1989**, 7, 581-588	0.9	

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12	Computational and experimental studies on the implosion processes of laser fusion targets. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1987**, 5, 2743-2745	2.9
11	Magnetic Field Effects on Resonance Absorption. *Journal of the Physical Society of Japan*, **1985**, 54, 4178-4187	1.5
10	Relativistic Laser-Electron Interactions. *Springer Series in Plasma Science and Technology*, **2020**, 167-202	0.3
9	High Power Laser Astrophysics. *The Review of Laser Engineering*, **2001**, 29, 82-83	0
8	Potentiality of the Laboratory Astrophysics Using High Repetition Rate and High Intensity Lasers. *The Review of Laser Engineering*, **2003**, 31, 711-720	0
7	Laser accelerators (Recent topics on beat wave acceleration).. *The Review of Laser Engineering*, **1987**, 15, 481-494	0
6	Design study of an indirect-drive target.. *Kakuyūgō Kenkyū*, **1990**, 64, 408-429	
5	??????????????. *The Review of Laser Engineering*, **1995**, 23, 117-120	0
4	Prospect on the Atomic and Molecular Processes in Plasmas. Transport Code. Radiation Transport Code.. *Journal of Plasma and Fusion Research*, **1999**, 75, 1145-1155	
3	Laboratory Astrophysics with Lasers: Turbulent Electromagnetic Field Associated with Collisionless Shocks. *The Review of Laser Engineering*, **2013**, 41, 20	0
2	Review of Laser Fusion Theory and Simulation. *The Review of Laser Engineering*, **1986**, 14, 1066-1089	0
1	Directly Driven Implosion by Laser. *Kakuyūgō Kenkyū*, **1987**, 58, 244-254	