

# Hideaki Takabe

## List of Publications by Year in descending order

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112  
papers

2,748  
citations

218677

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112  
all docs

112  
docs citations

112  
times ranked

1591  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Recent progress of laboratory astrophysics with intense lasers. High Power Laser Science and Engineering, 2021, 9, .   | 4.6  | 27        |
| 2  | Relativistic Laser-Electron Interactions. Springer Series in Plasma Science and Technology, 2020, , 167-202.   | 0.2  | 0         |
| 3  | Collisionless Shocks Driven by Supersonic Plasma Flows with Self-Generated Magnetic Fields. Physical Review Letters, 2019, 123, 055002.                              | 7.8  | 26        |
| 4  | Maximizing magnetic field generation in high power laser-solid interactions. High Power Laser Science and Engineering, 2019, 7, .                                    | 4.6  | 19        |
| 5  | Optimizing the energies conversion in laser-electron beam collision. Physics of Plasmas, 2019, 26, 033102.   | 1.9  | 3         |
| 6  | The suppression of radiation reaction and laser field depletion in laser-electron beam interaction. Physics of Plasmas, 2018, 25, .                                  | 1.9  | 5         |
| 7  | Magnetic field production via the Weibel instability in interpenetrating plasma flows. Physics of Plasmas, 2017, 24, .   | 1.9  | 27        |
| 8  | Generation of counter-streaming plasmas for collisionless shock experiment. High Energy Density Physics, 2017, 23, 207-211.  | 1.5  | 4         |
| 9  | Transition from Collisional to Collisionless Regimes in Interpenetrating Plasma Flows on the National Ignition Facility. Physical Review Letters, 2017, 118, 185003. | 7.8  | 49        |
| 10 | Characterization of electrostatic shock in laser-produced optically-thin plasma flows using optical diagnostics. Physics of Plasmas, 2017, 24, 072701.               | 1.9  | 5         |
| 11 | Ionization and reflux dependence of magnetic instability generation and probing inside laser-irradiated solid thin foils. Physics of Plasmas, 2017, 24, 103115.      | 1.9  | 14        |
| 12 | Proton imaging of an electrostatic field structure formed in laser-produced counter-streaming plasmas. Journal of Physics: Conference Series, 2016, 688, 012071.     | 0.4  | 6         |
| 13 | Radiation reaction in the interaction of ultraintense laser with matter and gamma ray source. Physics of Plasmas, 2016, 23, .  | 1.9  | 8         |
| 14 | Collisionless electrostatic shock generation using high-energy laser systems. Advances in Physics: X, 2016, 1, 425-443.  | 4.1  | 10        |
| 15 | Collisionless shock experiments with lasers and observation of Weibel instabilities. Physics of Plasmas, 2015, 22, .   | 1.9  | 51        |
| 16 | Observation of magnetic field generation via the Weibel instability in interpenetrating plasma flows. Nature Physics, 2015, 11, 173-176.                             | 16.7 | 236       |
| 17 | Obtaining Correct and Physically Meaningful Results for Simulations of the Richtmyer-Meshkov Instability (RMI) Driven by Shock Wave. , 2014, , .                     |      | 0         |
| 18 | Conference on Computational Physics 2012. Asia-Pacific Physics Newsletter, 2013, 02, 12-13.  | 0.0  | 0         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | Thomson scattering measurement of a shock in laser-produced counter-streaming plasmas. <i>Physics of Plasmas</i> , 2013, 20, .   | 1.9  | 25        |
| 20 | Visualizing electromagnetic fields in laser-produced counter-streaming plasma experiments for collisionless shock laboratory astrophysics. <i>Physics of Plasmas</i> , 2013, 20, .           | 1.9  | 36        |
| 21 | Laboratory Astrophysics with Lasers: Turbulent Electromagnetic Field Associated with Collisionless Shocks. <i>The Review of Laser Engineering</i> , 2013, 41, 20.                            | 0.0  | 0         |
| 22 | Optical pyrometer system for collisionless shock experiments in high-power laser-produced plasmas. <i>Review of Scientific Instruments</i> , 2012, 83, 10D514.                               | 1.3  | 3         |
| 23 | Kelvin-Helmholtz Turbulence Associated with Collisionless Shocks in Laser Produced Plasmas. <i>Physical Review Letters</i> , 2012, 108, 195004.  | 7.8  | 34        |
| 24 | Studying astrophysical collisionless shocks with counterstreaming plasmas from high power lasers. <i>High Energy Density Physics</i> , 2012, 8, 38-45.                                       | 1.5  | 82        |
| 25 | Self-organized electromagnetic field structures in laser-produced counter-streaming plasmas. <i>Nature Physics</i> , 2012, 8, 809-812.   | 16.7 | 118       |
| 26 | Characterizing counter-streaming interpenetrating plasmas relevant to astrophysical collisionless shocks. <i>Physics of Plasmas</i> , 2012, 19, .  | 1.9  | 101       |
| 27 | Collisionless Shock Wave Generation in Counter-Streaming Plasmas Using Gekko XII HIPER Laser. <i>Plasma and Fusion Research</i> , 2011, 6, 2404057-2404057.                                  | 0.7  | 4         |
| 28 | Laboratory Astrophysics Experiment Using High-Power Lasers. <i>The Review of Laser Engineering</i> , 2011, 39, 5-11.   | 0.0  | 0         |
| 29 | Formation of density inhomogeneity in laser produced plasmas for test bed of magnetic field amplification in supernova remnants. <i>Astrophysics and Space Science</i> , 2011, 336, 269-272. | 1.4  | 11        |
| 30 | Highly radiative shock experiments driven by GEKKO XII. <i>Astrophysics and Space Science</i> , 2011, 336, 213-218.  | 1.4  | 14        |
| 31 | The scalability of the accretion column in magnetic cataclysmic variables: the POLAR project. <i>Astrophysics and Space Science</i> , 2011, 336, 81-85.                                      | 1.4  | 19        |
| 32 | Time Evolution of Collisionless Shock in Counterstreaming Laser-Produced Plasmas. <i>Physical Review Letters</i> , 2011, 106, 175002.  | 7.8  | 127       |
| 33 | Model experiment of cosmic ray acceleration due to an incoherent wakefield induced by an intense laser pulse. <i>Physics of Plasmas</i> , 2011, 18, 010701.                                  | 1.9  | 23        |
| 34 | Can X-Ray Lasers Exist in Astrophysical Objects ?. <i>Publication of the Astronomical Society of Japan</i> , 2011, 63, 727-733.  | 2.5  | 1         |
| 35 | Characteristic measurements of silicon dioxide aerogel plasmas generated in a Planckian radiation environment. <i>Physics of Plasmas</i> , 2010, 17, .                                       | 1.9  | 5         |
| 36 | Electrostatic and electromagnetic instabilities associated with electrostatic shocks: Two-dimensional particle-in-cell simulation. <i>Physics of Plasmas</i> , 2010, 17, 032114.             | 1.9  | 78        |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 37 | NONRELATIVISTIC COLLISIONLESS SHOCKS IN WEAKLY MAGNETIZED ELECTRON-ION PLASMAS: TWO-DIMENSIONAL PARTICLE-IN-CELL SIMULATION OF PERPENDICULAR SHOCK. <i>Astrophysical Journal</i> , 2010, 721, 828-842. | 4.5  | 58        |
| 38 | Collisionless shock generation in high-speed counterstreaming plasma flows by a high-power laser. <i>Physics of Plasmas</i> , 2010, 17, .  | 1.9  | 50        |
| 39 | JET FORMATION IN COUNTERSTREAMING COLLISIONLESS PLASMAS. <i>Astrophysical Journal</i> , 2009, 707, L137-L141.  | 4.5  | 21        |
| 40 | Recent studies of high energy density physics at the institute of physics, Beijing. , 2009, , .  |      | 0         |
| 41 | Experimental results to study astrophysical plasma jets using Intense Lasers. <i>Astrophysics and Space Science</i> , 2009, 322, 25-29.  | 1.4  | 11        |
| 42 | A jet production experiment using the high-repetition rate Astra laser. <i>Astrophysics and Space Science</i> , 2009, 322, 31-35.  | 1.4  | 7         |
| 43 | X-ray astronomy in the laboratory with a miniature compact object produced by laser-driven implosion. <i>Nature Physics</i> , 2009, 5, 821-825.  | 16.7 | 113       |
| 44 | Calculation of Photoionized Plasmas with a Detailed-Configuration-Accounting Atomic Model. <i>Journal of the Physical Society of Japan</i> , 2009, 78, 064301.   | 1.6  | 1         |
| 45 | Recent Laboratory Astrophysics Experiments at LULI. <i>Plasma and Fusion Research</i> , 2009, 4, 044-044.  | 0.7  | 5         |
| 46 | Experimental evidence and theoretical analysis of photoionized plasma under x-ray radiation produced by an intense laser. <i>Physics of Plasmas</i> , 2008, 15, .                                      | 1.9  | 28        |
| 47 | High-Mach number collisionless shock and photo-ionized non-LTE plasma for laboratory astrophysics with intense lasers. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124057.                 | 2.1  | 60        |
| 48 | Nonrelativistic Collisionless Shocks in Unmagnetized Electron-Ion Plasmas. <i>Astrophysical Journal</i> , 2008, 681, L93-L96.  | 4.5  | 137       |
| 49 | Spectrum modulation of relativistic electrons by laser wakefield. <i>Applied Physics Letters</i> , 2008, 93, 081501.   | 3.3  | 8         |
| 50 | Nonlinear Dynamics of Ionization Fronts in HII Regions. <i>Astrophysics and Space Science</i> , 2007, 307, 183-186.  | 1.4  | 4         |
| 51 | Eagle Nebula Pillars: From Models to Observations. <i>Astrophysics and Space Science</i> , 2005, 298, 177-181.   | 1.4  | 5         |
| 52 | Hydrodynamic Instability of Ionization Front in HII Regions: From Linear to Nonlinear Evolution. <i>Astrophysics and Space Science</i> , 2005, 298, 197-202.   | 1.4  | 11        |
| 53 | X-ray Line and Recombination Emission in the Afterglow of Grb. <i>Astrophysics and Space Science</i> , 2005, 298, 323-326.   | 1.4  | 0         |
| 54 | Numerical Simulation of Non-spherical Implosion Related to Fast Ignition. <i>AIP Conference Proceedings</i> , 2003, , .  | 0.4  | 5         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 55 | 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. | 0.4  | 2         |
| 56 | Potentiality of the Laboratory Astrophysics Using High Repetition Rate and High Intensity Lasers. The Review of Laser Engineering, 2003, 31, 711-720.  | 0.0  | 0         |
| 57 | Imprint reduction in a plasma layer preformed with x-ray irradiation. Physics of Plasmas, 2002, 9, 1381-1391.  | 1.9  | 12        |
| 58 | Single spatial mode experiments on initial laser imprint on direct-driven planar targets. Physics of Plasmas, 2002, 9, 1734-1744.  | 1.9  | 15        |
| 59 | Numerical study of pair creation by ultraintense lasers. Physics of Plasmas, 2002, 9, 1505-1512.   | 1.9  | 82        |
| 60 | Relativistic Plasma Physics. Relativistic Motion of Charged Particles in Ultra-Intense Laser Fields.. Journal of Plasma and Fusion Research, 2002, 78, 341-346.  | 0.4  | 3         |
| 61 | Monochromatic x-ray imaging with bent crystals for laser fusion research. Review of Scientific Instruments, 2001, 72, 744-747.   | 1.3  | 17        |
| 62 | Laboratory simulation of the collision of supernova 1987A with its circumstellar ring nebula. Plasma Physics Reports, 2001, 27, 843-851.   | 0.9  | 14        |
| 63 | High Power Laser Astrophysics. The Review of Laser Engineering, 2001, 29, 82-83.   | 0.0  | 0         |
| 64 | Modeling Astrophysical Phenomena in the Laboratory with Intense Lasers. Science, 1999, 284, 1488-1493.   | 12.6 | 369       |
| 65 | Prospect on the Atomic and Molecular Processes in Plasmas. Transport Code. Radiation Transport Code.. Journal of Plasma and Fusion Research, 1999, 75, 1145-1155.  | 0.4  | 0         |
| 66 | Fast Ignitor Research with Use of Ultra-Intense Laser System.. Journal of Plasma and Fusion Research, 1999, 75, 452-458.   | 0.4  | 2         |
| 67 | Measured laser fusion gains reproduced by self-similar volume compression and volume ignition for NIF conditions. Journal of Plasma Physics, 1998, 60, 743-760.  | 2.1  | 38        |
| 68 | 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.   | 1.3  | 11        |
| 69 | Time-resolved, two-dimensional electron-temperature distribution of laser-imploded core plasmas. Review of Scientific Instruments, 1997, 68, 820-823.  | 1.3  | 13        |
| 70 | Effects of neutron heating on ignition and energy gain of laser-imploded D-T pellets. Laser and Particle Beams, 1997, 15, 259-276.   | 1.0  | 4         |
| 71 | Atomic Number Scaling of the Nickel-Like Soft X-Ray Lasers. International Journal of Modern Physics B, 1997, 11, 945-990.  | 2.0  | 33        |
| 72 | Development of inertial fusion energy. , 1997, , .   |      | 1         |

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|----|--|-----|-----------|
| 73 | Agreement of measured fusion gains with the self-similarity model and volume ignition for NIF conditions. , 1997, , .  |     | 0         |
| 74 | Laser Fusion Research at Ile Osaka University. Fusion Science and Technology, 1996, 30, 625-633.   | 0.6 | 3         |
| 75 | Kinetic effects on the electron thermal transport in ignition target design. AIP Conference Proceedings, 1996, , .   | 0.4 | 1         |
| 76 | Instabilities of nuclear flames in thermonuclear supernovae. AIP Conference Proceedings, 1996, , .   | 0.4 | 1         |
| 77 | Implosion experiments with uniformity-improved GEKKO XII: Overview. AIP Conference Proceedings, 1996, , .  | 0.4 | 1         |
| 78 | 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.      | 1.9 | 34        |
| 79 | Kinetic effects on the electron thermal transport in ignition target design. Physics of Plasmas, 1996, 3, 3420-3424.   | 1.9 | 12        |
| 80 | Study of indirectly driven implosion by x-ray spectroscopic measurements. Physics of Plasmas, 1995, 2, 2063-2074.  | 1.9 | 42        |
| 81 | Cryogenic deuterium target experiments with the GEKKO XII, green laser system. Physics of Plasmas, 1995, 2, 2495-2503.   | 1.9 | 18        |
| 82 | ãf-ãf¼ã, ¶ãf¼æ, èžðç, ¼ç¼fç,, ¼ããããã. The Review of Laser Engineering, 1995, 23, 117-120.  | 0.0 | 0         |
| 83 | High energy particle transport in laser fusion. AIP Conference Proceedings, 1994, , .  | 0.4 | 1         |
| 84 | Indirect-drive inertial fusion research at the Institute of Laser Engineering. AIP Conference Proceedings, 1994, , .   | 0.4 | 0         |
| 85 | 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 | 42        |
| 86 | Line profile modeling for non-LTE partially ionized plasmas based on average atom model with <i>T</i>-splitting. Laser and Particle Beams, 1993, 11, 81-87.                                      | 1.0 | 8         |
| 87 | Properties of an exploding foil neon-like germanium soft X-ray laser. Laser and Particle Beams, 1993, 11, 109-117.   | 1.0 | 7         |
| 88 | Numerical simulation of implosion and burn of <i>T</i> ignitor/D<sup>3</sup>He fuel pellet for D<sup>3</sup>He inertial confinement fusion reactor. Laser and Particle Beams, 1993, 11, 137-147. | 1.0 | 5         |
| 89 | Non-LTE atomic modeling for laser-produced plasmas. Laser and Particle Beams, 1993, 11, 119-126.   | 1.0 | 1         |
| 90 | Radiation-driven cannonball targets for high-convergence implosions. Laser and Particle Beams, 1993, 11, 89-96.  | 1.0 | 2         |

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|-----|---|-----|-----------|
| 91  | Preliminary Studies of Direct Energy Conversion in a D- <sup>3</sup> He Inertial Confinement Fusion Reactor. Fusion Science and Technology, 1992, 22, 56-65.  | 0.6 | 8         |
| 92  | Design of Laser Fusion Reactor driven by Laser-Diode-Pumped Solid State Laser. Fusion Science and Technology, 1992, 21, 1460-1464.  | 0.6 | 5         |
| 93  | Beatwave excitation of plasma wave and electron acceleration. AIP Conference Proceedings, 1991, , .   | 0.4 | 1         |
| 94  | Recent results from experiments on x-ray confining cavities (abstract). Review of Scientific Instruments, 1990, 61, 2813-2813.  | 1.3 | 1         |
| 95  | Soft X ray radiation confinement in laser fusion.. KakuyÅ«gÅ•KenkyÅ«, 1990, 63, 219-234.  | 0.1 | 3         |
| 96  | Design study of an indirect-drive target.. KakuyÅ«gÅ•KenkyÅ«, 1990, 64, 408-429.  | 0.1 | 0         |
| 97  | Pusherless implosion, pulse tailoring and ignition scaling law for laser fusion. Laser and Particle Beams, 1989, 7, 249-258.  | 1.0 | 20        |
| 98  | Theory of efficient shell implosions. Laser and Particle Beams, 1989, 7, 189-205.   | 1.0 | 5         |
| 99  | Requirement of uniformity for fuel ignition and uniformity in high neutron yield implosion. Laser and Particle Beams, 1989, 7, 175-187.   | 1.0 | 16        |
| 100 | Internal structure of a partially ionized heavy ion. Isolated ion model. Laser and Particle Beams, 1989, 7, 581-588.  | 1.0 | 0         |
| 101 | Theoretical studies on electron and radiation preheatings. Laser and Particle Beams, 1989, 7, 487-493.  | 1.0 | 4         |
| 102 | Scalings of implosion experiments for high neutron yield. Physics of Fluids, 1988, 31, 2884.  | 1.4 | 165       |
| 103 | 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.                    | 2.1 | 0         |
| 104 | Directly Driven Implosion by Laser. KakuyÅ«gÅ•KenkyÅ«, 1987, 58, 244-254.   | 0.1 | 0         |
| 105 | Laser accelerators (Recent topics on beat wave acceleration).. The Review of Laser Engineering, 1987, 15, 481-494.  | 0.0 | 0         |
| 106 | Review of Laser Fusion Theory and Simulation. The Review of Laser Engineering, 1986, 14, 1066-1089.   | 0.0 | 0         |
| 107 | Magnetic Field Effects on Resonance Absorption. Journal of the Physical Society of Japan, 1985, 54, 4178-4187.  | 1.6 | 0         |
| 108 | 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. | 1.5 | 8         |

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|-----|--|-----|-----------|
| 109 | Electrostatic Field Generation and Hot Electron Reduction in a Laser Produced Plasma. Journal of the Physical Society of Japan, 1982, 51, 2293-2299. | 1.6 | 6         |
| 110 | Effects of Thermal Conduction and Compressibility on Rayleigh-Taylor Instability. Journal of the Physical Society of Japan, 1980, 48, 1793-1794.     | 1.6 | 16        |
| 111 | Ablation and Compression Mechanism in Laser Fusion Plasma.. The Review of Laser Engineering, 1979, 7, 394-400.                                       | 0.0 | 1         |
| 112 | High-intensity x-ray pulses from picosecond glass laser produced plasmas. , 0, , .   |     | 0         |