Atsushi Okamoto

List of Publications by Year
in descending order

123	793	623734 14	642732 23
papers	citations	h-index	g-index

123	123	123	428
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Experimental observation of a tripolar vortex in a plasma. Physics of Plasmas, 2003, 10, 2211-2216.	1.9	58
2	Plasma Flow Measurement Using Directional Langmuir Probe Under Weakly Ion-Magnetized Conditions. Journal of the Physical Society of Japan, 2001, 70, 131-137.	1.6	43
3	Spontaneous Formation of a Plasma Hole in a Rotating Magnetized Plasma: A Giant Burgers Vortex in a Compressible Fluid. Physical Review Letters, 2002, 89, 075001.	7.8	37
4	Diagnostics of Recombining Plasmas in Divertor Simulator MAP-II. Journal of Plasma and Fusion Research, 2005, 81, 810-821.	0.4	36
5	Extension of operation regimes and investigation of three-dimensional currentless plasmas in the Large Helical Device. Nuclear Fusion, 2013, 53, 104015.	3.5	35
6	Analytical Description of a Neutral-Induced Tripole Vortex in a Plasma. Physical Review Letters, 2002, 89, 265002.	7.8	34
7	Practical formula for Mach number probe diagnostics in weakly magnetized plasmas. Physics of Plasmas, 2005, 12, 044504.	1.9	27
8	Laser Thomson scattering system applicable to low-temperature plasma in the divertor simulator MAP-II. Review of Scientific Instruments, 2005, 76, 116106.	1.3	24
9	An experimental comparison of gross and net erosion of Mo in the DIII-D divertor. Journal of Nuclear Materials, 2013, 438, S309-S312.	2.7	22
10	Development of a Helicon Plasma Source for the Measurement of He* Component in a He0 Beam. Plasma and Fusion Research, 2008, 3, 059-059.	0.7	20
11	Experimental study of negative ion profiles in H2-MAR plasmas in divertor simulator MAP-II. Journal of Nuclear Materials, 2005, 337-339, 166-170.	2.7	18
12	Application of eclipse laser photodetachment technique to electron sheath thickness and collection region measurements. Physical Review E, 2004, 70, 066403.	2.1	16
13	Confined alpha particle diagnostic system using an energetic He0 beam for ITER. Review of Scientific Instruments, 2006, 77, 10F130.	1.3	15
14	Contribution of hydrogen molecular assisted recombination processes to population of hydrogen atom in divertor simulator MAP-II. Journal of Nuclear Materials, 2007, 363-365, 395-399.	2.7	14
15	Comparison of Langmuir Probe and Laser Thomson Scattering Methods in the Electron Temperature Measurement in Divertor Simulator MAP-II. Contributions To Plasma Physics, 2006, 46, 416-421.	1.1	13
16	Optimization of a compact multicusp He+ ion source for double-charge-exchanged Heâˆ’ beam. Review of Scientific Instruments, 2006, 77, 03B512.	1.3	12
17	Thomson Scattering Measurements of Helium Recombining Plasmas in the Divertor Simulator MAP-II. Plasma and Fusion Research, 2006, 1, 054-054.	0.7	12
18	Development of neutron measurement system for ndâˆ•nt fuel ratio measurement in ITER experiments. Review of Scientific Instruments, 2006, 77, 10E726.	1.3	11

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19	Effect of ion beam and neutron irradiations on the luminescence of polycrystalline Ce-doped Y3Al5O12 ceramics. Journal of Nuclear Materials, 2009, 386-388, 1049-1051.	2.7	11
20	Development of Laser Photodetachment Technique Using Heated Probe to Eliminate the Effect of Probe Surface Ablation Phenomena. Japanese Journal of Applied Physics, 2005, 44, 8661-8666.	1.5	10
21	A Concept of Negative Ion Flow Velocity Measurement Using a Laser Photodetachment Velocimetry (LPDV). Contributions To Plasma Physics, 2006, 46, 367-372.	1.1	10
22	Characterization of scintillators for lost alpha diagnostics on burning plasma experiments. Review of Scientific Instruments, 2006, 77, 10E720.	1.3	10
23	Line Spectra Observation of the Rydberg Helium Atoms due to Volumetric Recombination in the RF Plasma Source DT-ALPHA. Fusion Science and Technology, 2013, 63, 404-407.	1.1	9
24	Experimental study of the volumetric recombination under energetic ion flow using a radio-frequency plasma source. Physics of Plasmas, 2016, 23, .	1.9	9
25	Measurement of Tokamak Plasma with the External Helical Field Using a High-Speed Camera in TOKASTAR-2. Plasma and Fusion Research, 2016, 11, 2402074-2402074.	0.7	9
26	Estimation of Tokamak Plasma Position and Shape in TOKASTAR-2 Using Magnetic Field Measurement. Plasma and Fusion Research, 2018, 13, 3402072-3402072.	0.7	9
27	Charge Exchange Momentum Transfer due to Ion Beam Injection in Partially Ionized Plasmas. Plasma and Fusion Research, 2011, 6, 1201153-1201153.	0.7	9
28	Measurement of fluctuations in the supersonic poloidal flow driven by a hot cathode. Plasma Physics and Controlled Fusion, 2006, 48, A285-A293.	2.1	8
29	Steady-State Recombining Plasma in a Radio-Frequency Plasma Device for Divertor-Detachment Study. Plasma and Fusion Research, 2012, 7, 2401018-2401018.	0.7	8
30	Investigation of Mach probe geometry effects in weakly magnetized plasmas. Journal of Nuclear Materials, 2005, 337-339, 1077-1081.	2.7	7
31	Particle reflections of low energy light ions from a vanadium alloy (Vâ€“4Crâ€“4Ti). Journal of Nuclear Materials, 2007, 363-365, 1304-1308.	2.7	7
32	Full orbit calculation for lost alpha particle measurement on ITER. Review of Scientific Instruments, 2008, 79, 10E512.	1.3	7
33	Effects of roughness and temperature on low-energy hydrogen positive and negative ion reflection from silicon and carbon surfaces. Review of Scientific Instruments, 2014, 85, 02C311.	1.3	7
34	Exploration of spontaneous vortex formation and intermittent behavior in ECR plasmas: The HYPER-I experiments. Journal of Plasma Physics, 2015, 81, .	2.1	7
35	Magnetic Field Configuration Dependence of Plasma Production and Parallel Transport in a Linear Plasma Device NUMBER. Plasma and Fusion Research, 2018, 13, 3401044-3401044.	0.7	7
36	Fast neutron-gamma discrimination on neutron emission profile measurement on JT-60U. Review of Scientific Instruments, 2010, 81, 10D334.	1.3	6

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37	Electrode biasing experiment in the Large Helical Device. Nuclear Fusion, 2011, 51, 083029.	3.5	6
38	Transition of poloidal viscosity by electrode biasing in the Large Helical Device. Nuclear Fusion, 2013, 53, 073014.	3.5	6
39	Development of ion source for simulation of edge localized mode in divertor plasma. Review of Scientific Instruments, 2014, 85, 02B307.	1.3	6
40	Asymmetry of velocity distribution function and inhomogeneity-induced flow associated with neutral depletion structure in an ECR plasma. Physics of Plasmas, 2016, 23, .	1.9	6
41	Tripolar vortex in a plasma. IEEE Transactions on Plasma Science, 2005, 33, 452-453.	1.3	5
42	Effects of Rational Surfaces and Magnetic Islands on Radial Electric Fields and Ion Viscosity in Tohoku University Heliac. Fusion Science and Technology, 2006, 50, 201-206.	1.1	5
43	Spontaneous Lâ€“H transitions under marginal hot cathode biasing in the Tohoku University Heliac. Plasma Physics and Controlled Fusion, 2006, 48, A259-A267.	2.1	5
44	Study of Metastable Population Density in a Hollow Cathode Helium Discharge. Plasma and Fusion Research, 2007, 2, 029-029.	0.7	5
45	Helium Volumetric Recombining Plasma Formation for Energetic Ion Injection in Radio-Frequency Plasma Device DT-ALPHA. Plasma and Fusion Research, 2016, 11, 2402059-2402059.	0.7	5
46	Study on Stabilization of Vertical Position of Tokamak Plasma with Local Helical Coils in TOKASTAR-2. Plasma and Fusion Research, 2020, 15, 1402083-1402083.	0.7	5
47	Laser Absorption Spectroscopy for Diagnostics of a Neutral Helium Beam. Plasma and Fusion Research, 2007, 2, S1044-S1044.	0.7	5
48	Advanced Probe Measurement System in TU-Heliac. Plasma and Fusion Research, 2007, 2, S1090-S1090.	0.7	5
49	Comparison between Laser Thomson Scattering and Spectroscopic Measurements in Low Temperature Helium Plasmas in Divertor/Edge Simulator MAP-II. Plasma and Fusion Research, 2007, 2, S1110-S1110.	0.7	5
50	Parallel Ion Flow Velocity Measurement Using Laser Induced Fluorescence Method in an Electron Cyclotron Resonance Plasma. Plasma and Fusion Research, 2010, 5, S2052-S2052.	0.7	5
51	Charge-Exchanged Beam Measurement by Using a Grid-Biased Faraday Cup. Plasma and Fusion Research, 2010, 5, S2088-S2088.	0.7	5
52	Plasma hole. IEEE Transactions on Plasma Science, 2005, 33, 454-455.	1.3	4
53	Measurements of Directional Flow Using a Directional Langmuir Probe in Weakly Magnetized Plasmas. Contributions To Plasma Physics, 2006, 46, 427-432.	1.1	4
54	Development of a strongly focusing high-intensity He[sup +] ion source for a confined alpha particle measurement at ITER. Review of Scientific Instruments, 2008, 79, 02C113.	1.3	4

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55	Characteristics of a He[sup â^'] Beam Produced in Lithium Vapor. , 2009, , .		4
56	Detection of lost alpha particle by concealed lost ion probe. Review of Scientific Instruments, 2010, 81, 10D312.	1.3	4
57	Influence of electron energy distribution on helium recombining plasma diagnostics using line emissions. Contributions To Plasma Physics, 2017, 57, 322-328.	1.1	4
58	Stabilization of plasma vertical position of elongated tokamak using upper and lower triangular coils. Physics of Plasmas, 2021, 28, 082108.	1.9	4
59	Measurement of Azimuthal Flow Velocity Using Laser-Induced Fluorescence Spectroscopy in a HYPER-I Plasma. Journal of Plasma and Fusion Research, 2004, 80, 1003-1004.	0.4	4
60	The effects of inelastic collisions on waves in partially ionized plasma. Plasma Sources Science and Technology, 2006, 15, S1-S7.	3.1	3
61	High-Density Plasma Production by Hydrogen Storage Electrode in the Tohoku University Heliac. Fusion Science and Technology, 2006, 50, 434-439.	1.1	3
62	Potential and Density Fluctuation Characteristics of the Hot-Cathode-Biased Supersonic Plasma in TU-Heliac. Fusion Science and Technology, 2007, 51, 265-267.	1.1	3
63	Measurement of Gas Composition Ratio of H-He Mixture Plasmas in Divertor Simulator MAP-II. Plasma and Fusion Research, 2007, 2, S1081-S1081.	0.7	3
64	Diagnostics of a He[sup +] beam extracted from a compact magnetic bucket-type ion source. Review of Scientific Instruments, 2008, 79, 02B708.	1.3	3
65	A beam transport system for an intense He[sup â^'] beam source. Review of Scientific Instruments, 2008, 79, 02A512.	1.3	3
66	Energy straggling of low-energy ion beam in a charge exchange cell for negative ion production. Review of Scientific Instruments, 2008, 79, 02A509.	1.3	3
67	Validation of ion temperature measurement using an ion sensitive probe technique in finite boundary RF plasma. Physics of Plasmas, 2019, 26, .	1.9	3
68	Proof of Principle Experiment of a Fast He0 Beam Production for Alpha Particle Diagonostics. Plasma and Fusion Research, 2007, 2, S1105-S1105.	0.7	3
69	Density Collapse and Fluctuation Observed in Poloidally Rotating Plasma on TU-Heliac. Plasma and Fusion Research, 2008, 3, S1055-S1055.	0.7	3
70	Formation of Visco-dissipative Vortex and Quasi-neutrality Breaking in a Magnetoplasma. Physica Scripta, 2004, T107, 49.	2.5	2
71	Study of ion viscosity by spontaneous Lâ€“H transitions under marginal hot cathode biasing in the Tohoku University Heliac. Nuclear Fusion, 2008, 48, 035002.	3.5	2
72	Effects of filament geometry on the arc efficiency of a high-intensity He+ ion source. Review of Scientific Instruments, 2008, 79, 10F316.	1.3	2

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73	Fine-structure characteristics in the emittance images of a strongly focusing He+ beam. Review of Scientific Instruments, 2010, 81, 02B115.	1.3	2
74	Development of a He- and He0 beam source for alpha particle measurement in a burning plasma. Review of Scientific Instruments, 2012, 83, 02B115.	1.3	2
75	Electron Energy Distribution in a Divertor Simulating Device with an RF Source. Plasma and Fusion Research, 2014, 9, 3401065-3401065.	0.7	2
76	Energetic Helium Ion Injection into Helium Recombining Plasma in Radio-Frequency Plasma Source. Fusion Science and Technology, 2015, 68, 190-195.	1.1	2
77	Development of Magnetic Flux Surface Measurement Method on TOKASTAR-2. Plasma and Fusion Research, 2016, 11, 2402110-2402110.	0.7	2
78	Optimization study of normal conductor tokamak for commercial neutron source. Nuclear Fusion, 2017, 57, 056019.	3.5	2
79	Influence of the formation of a bi-Maxwellian distribution on volumetric recombining plasma spectroscopy. Physics of Plasmas, 2019, 26, 033506.	1.9	2
80	Economy of Tokamak Neutron Source for Transmutation of Transuranics. Plasma and Fusion Research, 2019, 14, 1405040-1405040.	0.7	2
81	High-Density Plasma Production in Converging Field Following a Magnetic Beach Plasma Source. Plasma and Fusion Research, 2019, 14, 2401005-2401005.	0.7	2
82	Determining the Closed Flux Surface in a Helical Plasma in TOKASTAR-2 with an Electrostatic Probe. Plasma and Fusion Research, 2018, 13, 1402039-1402039.	0.7	2
83	Equilibrium Analysis of Tokamak Plasma Including the Eddy Current Effects in TOKASTAR-2. Plasma and Fusion Research, 2020, 15, 2402047-2402047.	0.7	2
84	Effects of Rotating Magnetic Islands Driven by External Perturbation Fields in the TU-Heliac. Plasma and Fusion Research, 2008, 3, S1027-S1027.	0.7	2
85	Application of He I Line Intensity Ratio Method to Tokamak Plasma in TOKASTAR-2. Plasma and Fusion Research, 2018, 13, 3402047-3402047.	0.7	2
86	Variation of Doppler Broadening in High-Temperature Bubbles Created in an ECR Plasma. Plasma and Fusion Research, 2019, 14, 1201165-1201165.	0.7	2
87	On electron temperature rise in divertor relevant recombining plasma along magnetic field line. Physics of Plasmas, 2022, 29, 032508.	1.9	2
88	Development of hydrogen storage electrode for plasma biasing in the Tohoku University Heliac. Journal of Physics: Conference Series, 2008, 123, 012024.	0.4	1
89	An alpha particle measurement system using an energetic neutral helium beam in ITER (invited). Review of Scientific Instruments, 2012, 83, 02B718.	1.3	1
90	Extraction of a strongly focusing He+ beam from three-stage concave electrodes for alpha particle measurement system in ITER. Review of Scientific Instruments, 2012, 83, 02B120.	1.3	1

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91	Development of a High CMRR Magnetic Probe for the Biased Plasma in TU-Heliac. Plasma and Fusion Research, 2014, 9, 1202053-1202053.	0.7	1
92	Direct Measurement of Ion Temperature and Poloidal Rotation Velocity with Doppler Spectroscopy during Bifurcation in Tohoku University Heliac. Plasma and Fusion Research, 2014, 9, 3402051-3402051.	0.7	1
93	Observation of Intermittent Transition by Electrode Biasing in Heliotron J. Plasma and Fusion Research, 2015, 10, 3402061-3402061.	0.7	1
94	Development of Ion Sensitive Probe and Its Application to RF Plasma Device DT-ALPHA. Plasma and Fusion Research, 2018, 13, 3401090-3401090.	0.7	1
95	Divertor Plasma Simulation Experiment Using Hydrogen Ionizing Plasma and Helium Ion Beam in an RF Plasma Source DT-ALPHA. Plasma and Fusion Research, 2018, 13, 3401053-3401053.	0.7	1
96	Development of a High Energy Hydrogen Beam Injection System for Divertor Plasma Simulation Experiments on the DT-ALPHA Device. Plasma and Fusion Research, 2018, 13, 3402102-3402102.	0.7	1
97	Derivation of bootstrap current fraction scaling formula for 0-D system code analysis. Fusion Engineering and Design, 2019, 149, 111322.	1.9	1
98	Development of an ion beam measurement instrument for divertor simulation experiments in radio-frequency plasma. AIP Advances, 2020, 10, 085018.	1.3	1
99	Radial Profile Estimation of Electron Density in a Linear Plasma Device NUMBER Using a Single Line-of-Sight Signal. Plasma and Fusion Research, 2021, 16, 2401042-2401042.	0.7	1
100	Ion collision effect in collisional radiative processes in magnetized plasma. AIP Conference Proceedings, 2021, , .	0.4	1
101	Effects of Magnetic Islands Produced by External Perturbation Fields in the Tohoku University Heliac. Plasma and Fusion Research, 2010, 5, S2041-S2041.	0.7	1
102	Extended Range of Stable Radial Position of Tokamak Plasma in TOKASTAR-2. Plasma and Fusion Research, 2018, 13, 1402111-1402111.	0.7	1
103	Development and Evaluation of Ion Energy Analyzer for Energetic Ion Measurement in a Linear Plasma Device NUMBER. Plasma and Fusion Research, 2020, 15, 2401040-2401040.	0.7	1
104	Dependence of Plasma Parameters in Hydrogen Discharges on Magnetic Field Configuration and Neutral Pressure in the DT-ALPHA Device. Plasma and Fusion Research, 2020, 15, 1201056-1201056.	0.7	1
105	Magnetic Field Dependence of Transition to High Electron Density Phase in a Linear Plasma Device NUMBER. Plasma and Fusion Research, 2020, 15, 2401042-2401042.	0.7	1
106	High-Speed Analysis of Heating and Current Drive with Neutral Beam Injection in Tokamak Plasma. Plasma and Fusion Research, 2020, 15, 2401071-2401071.	0.7	1
107	Ion Temperature Measurements in Tohoku University Heliac for Analysis of the Improved Mode Transition. Fusion Science and Technology, 2007, 51, 268-270.	1.1	0
108	Study of Escaping Alpha Particle Orbits for Detector Design on ITER. AIP Conference Proceedings, 2008, , .	0.4	0

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109	Measurement of DT and DD components in neutron spectrum with a double-crystal time-of-flight spectrometer. AIP Conference Proceedings, 2008, , .	0.4	0
110	Development of a He[sup 0] Source for Confined Alpha Particle Measurement. AIP Conference Proceedings, 2008, , .	0.4	0
111	Electron Strippers for Compact Neutron Generators. , 2011, , .		0
112	Distribution of footprint marked by energetic alpha particle bombardment on the first wall. Journal of Nuclear Materials, 2013, 438, S883-S886.	2.7	0
113	Development of Multi-Port Imaging System for Divertor Simulating Linear Device. Fusion Science and Technology, 2013, 63, 205-208.	1.1	0
114	Bursting high-frequency fluctuation observed in biased plasma in TU-Heliac. Nuclear Fusion, 2014, 54, 114013.	3.5	0
115	Development ofin situenergetic ion injector for magnetically confined plasmas using hydrogen storage electrode. Review of Scientific Instruments, 2014, 85, 02B302.	1.3	0
116	Particle Pinch Model of Passing/Trapped High-Z Impurity with Centrifugal Force Effect. Plasma and Fusion Research, 2016, 11, 2403082-2403082.	0.7	0
117	Time Evolution of the Spatial Structure of the Radial Electric Field in the Tohoku University Heliac. Plasma and Fusion Research, 2008, 3, S1026-S1026.	0.7	0
118	Effects of Magnetic Islands on Poloidal Flow in TU-Heliac. Plasma and Fusion Research, 2011, 6, 2402144-2402144.	0.7	0
119	Ion Flow Measurement Using a Directional Langmuir Probe in the Radio Frequency Plasma Source DT-ALPHA. , 2014, , .		0
120	Power balance in the smallest tokamak. AIP Advances, 2022, 12, 045204.	1.3	0
121	Edge Transport Barrier Models for Simulating H-Mode Operation Scenarios in DEMO with Integrated Plasma Transport Code TOTAL. Plasma and Fusion Research, 2022, 17, 1403016-1403016.	0.7	0
122	Formulation of energy loss in a four-way circular manhole at crossroad. Water Science and Technology, 0, , .	2.5	0
123	Optimization of Magnetic Field Based on Electron Orbit Measurement in TOKASTAR-2 Helical Plasmas. Plasma and Fusion Research, 2022, 17, 2402071-2402071.	0.7	0