

# Walter Gekelman

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8611935/publications.pdf>

Version: 2024-02-01

124  
papers

2,985  
citations

136950

32  
h-index

197818

49  
g-index

128  
all docs

128  
docs citations

128  
times ranked

1505  
citing authors

#	ARTICLE	IF	CITATIONS
1	Design, construction, and properties of the large plasma research device~The LAPD at UCLA. Review of Scientific Instruments, 1991, 62, 2875-2883.	1.3	264
2	The upgraded Large Plasma Device, a machine for studying frontier basic plasma physics. Review of Scientific Instruments, 2016, 87, 025105.	1.3	112
3	Magnetic field line reconnection experiments 1. Field topologies. Journal of Geophysical Research, 1981, 86, 649-658.	3.3	100
4	Directional velocity analyzer for measuring electron distribution functions in plasmas. Review of Scientific Instruments, 1983, 54, 1302-1310.	1.3	74
5	Experiments on Magnetic-Field-Line Reconnection. Physical Review Letters, 1979, 42, 1055-1057.	7.8	71
6	Experimental observation of Alfvén wave cones. Physics of Plasmas, 1994, 1, 3775-3783.	1.9	71
7	Magnetic field line reconnection experiments, 4. Resistivity, heating, and energy flow. Journal of Geophysical Research, 1982, 87, 111-117.	3.3	70
8	Magnetic field line reconnection experiments, 3. Ion acceleration, flows, and anomalous scattering. Journal of Geophysical Research, 1982, 87, 101-110.	3.3	65
9	Magnetic field line reconnection experiments: 6. Magnetic turbulence. Journal of Geophysical Research, 1984, 89, 2715-2733.	3.3	62
10	Observation of collisionless shocks in a large current~free laboratory plasma. Geophysical Research Letters, 2014, 41, 7413-7418.	4.0	62
11	Laboratory Observations of Shear Alfvén Waves Launched from a Small Source. Physical Review Letters, 1999, 82, 2673-2676.	7.8	59
12	The many faces of shear Alfvén waves. Physics of Plasmas, 2011, 18, 055501.	1.9	55
13	The plasma source of the Large Plasma Device at University of California, Los Angeles. Review of Scientific Instruments, 2006, 77, 015108.	1.3	54
14	Identification of a Quasiseparatrix Layer in a Reconnecting Laboratory Magnetoplasma. Physical Review Letters, 2009, 103, 105002.	7.8	54
15	Microfabricated Flexible Electrodes for Multiaxis Sensing in the Large Plasma Device at UCLA. IEEE Transactions on Plasma Science, 2011, 39, 1507-1515.	1.3	52
16	Excitation of Chirping Whistler Waves in a Laboratory Plasma. Physical Review Letters, 2015, 114, 245002.	7.8	51
17	Large, quiescent, magnetized plasma for wave studies. Review of Scientific Instruments, 1975, 46, 1386-1393.	1.3	50
18	Magnetic field line reconnection experiments: 5. Current disruptions and double layers. Journal of Geophysical Research, 1983, 88, 4793-4804.	3.3	49

#	ARTICLE	IF	CITATIONS
19	Experimental observations of the tearing of an electron current sheet. <i>Physics of Fluids</i> , 1988, 31, 2017.	1.4	47
20	Whistler wave interaction with a density striation: A laboratory investigation of an auroral process. <i>Journal of Geophysical Research</i> , 1995, 100, 23795.	3.3	47
21	Measurements of the Shear Alfvén Wave Dispersion for Finite Perpendicular Wave Number. <i>Physical Review Letters</i> , 2003, 90, 035004.	7.8	45
22	Dynamics of exploding plasmas in a large magnetized plasma. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	45
23	Laboratory experiments on Alfvén waves caused by rapidly expanding plasmas and their relationship to space phenomena. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	44
24	Production of Alfvén Waves by a Rapidly Expanding Dense Plasma. <i>Physical Review Letters</i> , 2001, 87, 105001.	7.8	42
25	Laboratory Measurements of Electrostatic Solitary Structures Generated by Beam Injection. <i>Physical Review Letters</i> , 2010, 105, 115001.	7.8	41
26	Collisionless interaction of an energetic laser produced plasma with a large magnetoplasma. <i>Astrophysics and Space Science</i> , 2009, 322, 155-159.	1.4	40
27	THREE-DIMENSIONAL RECONNECTION INVOLVING MAGNETIC FLUX ROPES. <i>Astrophysical Journal</i> , 2012, 753, 131.	4.5	39
28	Magnetic field line reconnection experiments 2. Plasma parameters. <i>Journal of Geophysical Research</i> , 1981, 86, 659-666.	3.3	37
29	Generation of polarized shear Alfvén waves by a rotating magnetic field source. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	36
30	Shear Alfvén waves in a magnetic beach and the roles of electron and ion damping. <i>Physics of Plasmas</i> , 2001, 8, 3884-3896.	1.9	35
31	Laser-plasma diamagnetism in the presence of an ambient magnetized plasma. <i>Physics of Plasmas</i> , 2004, 11, 320-323.	1.9	35
32	High-energy Nd:glass laser facility for collisionless laboratory astrophysics. <i>Journal of Instrumentation</i> , 2012, 7, P03010-P03010.	1.2	34
33	Demonstration of helicity conservation during magnetic reconnection using Christmas ribbons. <i>American Journal of Physics</i> , 1991, 59, 497-502.	0.7	33
34	Generation of whistler waves by a rotating magnetic field source. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	31
35	Pulsating Magnetic Reconnection Driven by Three-Dimensional Flux-Rope Interactions. <i>Physical Review Letters</i> , 2016, 116, 235101.	7.8	31
36	Spectral gap of shear Alfvén waves in a periodic array of magnetic mirrors. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	29

#	ARTICLE	IF	CITATIONS
37	Magnetic Field Line Reconnection Experiments. <i>Physica Scripta</i> , 1982, T2B, 277-287.	2.5	28
38	Laboratory Simulation of Arched Magnetic Flux Rope Eruptions in the Solar Atmosphere. <i>Physical Review Letters</i> , 2010, 105, 075005.	7.8	28
39	Chaos in magnetic flux ropes. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 064002.	2.1	28
40	A three-dimensional experimental study of lower hybrid wave interactions with field-aligned density depletions. <i>Journal of Geophysical Research</i> , 2001, 106, 28867-28884.	3.3	27
41	A novel angular motion vacuum feedthrough. <i>Review of Scientific Instruments</i> , 2001, 72, 3473-3474.	1.3	27
42	Experimental measurements of the propagation of large-amplitude shear Alfvén waves. <i>Plasma Physics and Controlled Fusion</i> , 2000, 42, B15-B26.	2.1	26
43	A new large area lanthanum hexaboride plasma source. <i>Review of Scientific Instruments</i> , 2010, 81, 083503.	1.3	24
44	Three-dimensional current systems generated by plasmas colliding in a background magnetoplasma. <i>Physics of Plasmas</i> , 2007, 14, 062109.	1.9	22
45	Structure of an Exploding Laser-Produced Plasma. <i>Physical Review Letters</i> , 2010, 105, 195003.	7.8	22
46	Laser-driven, magnetized quasi-perpendicular collisionless shocks on the Large Plasma Device. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	22
47	Direct Detection of Resonant Electron Pitch Angle Scattering by Whistler Waves in a Laboratory Plasma. <i>Physical Review Letters</i> , 2014, 112, 145006.	7.8	22
48	Experimental study of subcritical laboratory magnetized collisionless shocks using a laser-driven magnetic piston. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	22
49	A resistively heated CeB <sub>6</sub> emissive probe. <i>Review of Scientific Instruments</i> , 2015, 86, 053507.	1.3	22
50	Wave and transport studies utilizing dense plasma filaments generated with a lanthanum hexaboride cathode. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	21
51	Three-dimensional measurements of plasma parameters in an inductively coupled plasma processing chamber. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	21
52	Experiments on the interaction of current channels in a laboratory plasma: relaxation to the force-free state. <i>IEEE Transactions on Plasma Science</i> , 1992, 20, 614-621.	1.3	20
53	Currents and shear Alfvén wave radiation generated by an exploding laser-produced plasma: Perpendicular incidence. <i>Physics of Plasmas</i> , 2003, 10, 1243-1252.	1.9	20
54	Morphology and dynamics of three interacting kink-unstable flux ropes in a laboratory magnetoplasma. <i>Physics of Plasmas</i> , 2012, 19, 102102.	1.9	20

#	ARTICLE	IF	CITATIONS
55	Experimental Observation of Convective Cell Formation due to a Fast Wave Antenna in the Large Plasma Device. <i>Physical Review Letters</i> , 2017, 119, 205002.	7.8	20
56	Laboratory simulation of magnetospheric chorus wave generation. <i>Plasma Physics and Controlled Fusion</i> , 2017, 59, 014016.	2.1	20
57	Electric field measurements of directly converted lower hybrid waves at a density striation. <i>Geophysical Research Letters</i> , 1998, 25, 865-868.	4.0	19
58	Measurement of ion motion in a shear Alfvén wave. <i>Physics of Plasmas</i> , 2005, 12, 072102.	1.9	19
59	Dynamics of an Erupting Arched Magnetic Flux Rope in a Laboratory Plasma Experiment. <i>Solar Physics</i> , 2013, 286, 479-492.	2.5	18
60	Laboratory observation of Alfvén resonance. <i>Geophysical Research Letters</i> , 2001, 28, 923-926.	4.0	17
61	Generation of suprathermal electrons and Alfvén waves by a high power pulse at the electron plasma frequency. <i>Physics of Plasmas</i> , 2006, 13, 092112.	1.9	17
62	Structure of an exploding laser-produced plasma. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	17
63	24 kA solid state switch for plasma discharge experiments. <i>Review of Scientific Instruments</i> , 2004, 75, 669-673.	1.3	16
64	Production of negative ions and generation of intense neutral beams by laser irradiation. <i>Applied Physics Letters</i> , 1974, 25, 579-580.	3.3	14
65	Modeling the propagation of whistler-mode waves in the presence of field-aligned density irregularities. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	14
66	Electrostatic structure of a magnetized laser-produced plasma. <i>Physical Review E</i> , 2015, 92, 051102.	2.1	14
67	Magnetic field line reconnection in the current systems of flux ropes and Alfvén waves. <i>Physica Scripta</i> , 2010, T142, 014032.	2.5	13
68	Generation of shear Alfvén waves by a rotating magnetic field source: Three-dimensional simulations. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	13
69	Nonlocal Ohms Law, Plasma Resistivity, and Reconnection During Collisions of Magnetic Flux Ropes. <i>Astrophysical Journal</i> , 2018, 853, 33.	4.5	12
70	Three-dimensional measurements of fundamental plasma parameters in pulsed ICP operation. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	12
71	Scattering of Magnetic Mirror Trapped Fast Electrons by a Shear Alfvén Wave. <i>Physical Review Letters</i> , 2012, 108, 105002.	7.8	11
72	A fully three-dimensional, removable, 10-cm-long, remotely controllable probe drive for a plasma discharge device. <i>Review of Scientific Instruments</i> , 1991, 62, 2884-2889.	1.3	10

#	ARTICLE	IF	CITATIONS
73	Large-scale Windows 95-based data-acquisition system using LabVIEW. Computers in Physics, 1997, 11, 498.	0.5	10
74	Drift-Alfvén wave mediated particle transport in an elongated density depression. Physics of Plasmas, 2006, 13, 064503.	1.9	10
75	Observation of fast-ion Doppler-shifted cyclotron resonance with shear Alfvén waves. Physics of Plasmas, 2008, 15, .	1.9	10
76	Quasielectrostatic whistler wave radiation from the hot electron emission of a laser-produced plasma. Physics of Plasmas, 2008, 15, .	1.9	10
77	Collisionless coupling of a high- $\beta^2$ expansion to an ambient, magnetized plasma. II. Experimental fields and measured momentum coupling. Physics of Plasmas, 2018, 25, .	1.9	10
78	Spiky electric and magnetic field structures in flux rope experiments. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 18239-18244.	7.1	10
79	Field line resonances in a cylindrical plasma. Physics of Plasmas, 2002, 9, 2909-2918.	1.9	9
80	Experimental study of the dynamics of a thin current sheet. Physica Scripta, 2016, 91, 054002.	2.5	9
81	Electron temperature measurements using a 12-channel array probe. Review of Scientific Instruments, 1983, 54, 935-939.	1.3	8
82	Generation of Alfvén waves by high power pulse at the electron plasma frequency. Geophysical Research Letters, 2005, 32, .	4.0	8
83	Cherenkov radiation of shear Alfvén waves. Physics of Plasmas, 2008, 15, .	1.9	8
84	Development of a radio-frequency ion beam source for fast-ion studies on the large plasma device. Review of Scientific Instruments, 2011, 82, 093501.	1.3	8
85	Using plasma experiments to illustrate a complex index of refraction. American Journal of Physics, 2011, 79, 894-902.	0.7	7
86	Direct density display with a resonance cone rf probe. Review of Scientific Instruments, 1977, 48, 485-487.	1.3	6
87	Flexible, real-time, data-collection and analysis system and its utilization in a basic plasma physics experiment (invited). Review of Scientific Instruments, 1986, 57, 1851-1855.	1.3	6
88	A laboratory investigation of lower hybrid wave interactions with a field-aligned density depletion. Geophysical Research Letters, 2000, 27, 859-862.	4.0	6
89	2-dimensional ion velocity distributions measured by laser-induced fluorescence above a radio-frequency biased silicon wafer. Physics of Plasmas, 2013, 20, 083506.	1.9	6
90	Non-local Ohm's law during collisions of magnetic flux ropes. Physics of Plasmas, 2017, 24, .	1.9	6

#	ARTICLE	IF	CITATIONS
91	Using topology to locate the position where fully three-dimensional reconnection occurs. SN Applied Sciences, 2020, 2, 1.	2.9	6
92	Correlation Analysis of Waves above a Capacitive Plasma Applicator. Physical Review Letters, 2009, 103, 045003.	7.8	5
93	Experimental study of a linear/non-linear flux rope. Physics of Plasmas, 2015, 22, 082118.	1.9	5
94	Excitation of shear Alfvén waves by a spiraling ion beam in a large magnetoplasma. Physical Review E, 2015, 91, 013109.	2.1	5
95	Design, construction and utilization of a university plasma laboratory. Journal of Plasma Physics, 2020, 86, .	2.1	5
96	First Results from the Thomson Scattering Diagnostic on the Large Plasma Device. Instruments, 2022, 6, 17.	1.8	5
97	Two-dimensional micron-step probe drive for laboratory plasma measurement. Review of Scientific Instruments, 2008, 79, 083505.	1.3	4
98	Direct measurement of the radiation resistance of a dipole antenna in the whistler/lower hybrid wave regime. Radio Science, 2010, 45, n/a-n/a.	1.6	4
99	Helicity transformation under the collision and merging of two magnetic flux ropes. Physics of Plasmas, 2017, 24, 072108.	1.9	4
100	Experiments on plasma arcs at a water-air interface. Physics of Plasmas, 2021, 28, .	1.9	4
101	Comment on "Properties of lower hybrid solitary structures: A comparison between space observations, a laboratory experiment, and the cold homogeneous plasma dispersion relation" by Schuck et al.. Journal of Geophysical Research, 2004, 109, .	3.3	3
102	Visualizing Three-Dimensional Reconnection in a Colliding Laser Plasma Experiment. IEEE Transactions on Plasma Science, 2008, 36, 1122-1123.	1.3	3
103	Laboratory Experiments on Magnetic Field Line Reconnection. Geophysical Monograph Series, 0, , 398-407.	0.1	3
104	Laboratory Experiments on Current Sheet Disruptions, Double Layers Turbulence and Reconnection. Symposium - International Astronomical Union, 1985, 107, 47-60.	0.1	2
105	Imaging complex three dimensional Alfvén wave currents. IEEE Transactions on Plasma Science, 2005, 33, 546-547.	1.3	2
106	Hard x-ray tomographic studies of the destruction of an energetic electron ring. Review of Scientific Instruments, 2013, 84, 053503.	1.3	2
107	Enhanced loss of magnetic-mirror-trapped fast electrons by a shear Alfvén wave. Physics of Plasmas, 2014, 21, 055705.	1.9	2
108	An RF amplifier for ICRF studies in the LAPD. AIP Conference Proceedings, 2015, , .	0.4	2

#	ARTICLE	IF	CITATIONS
109	Generation of shear Alfvén waves by repetitive electron heating. Journal of Geophysical Research: Space Physics, 2016, 121, 567-577.	2.4	2
110	Ferrite based antennae for launching Alfvén waves. Review of Scientific Instruments, 2019, 90, 083505.	1.3	2
111	Plasma Characterization Using a Silicon-Based Terahertz Frequency Comb Radiator. , 2020, 4, 1-4.		2
112	Experiments and Observations on Intense Alfvén Waves in the Laboratory and in Space. AIP Conference Proceedings, 2003, , .	0.4	1
113	10.1063/1.3224030.1. , 2009, , .		1
114	Laboratory experiments on current sheet disruptions, double layers, turbulence and reconnection. Geophysical Monograph Series, 1984, , 355-356.	0.1	0
115	Measurement Of Shear Alfvén Waves In The Lapd Device. , 0, , .		0
116	A whistler wave interaction with a density striation: a laboratory investigation of an auroral process. IEEE Transactions on Plasma Science, 1996, 24, 20-21.	1.3	0
117	Laboratory simulation of solar magnetic flux rope eruptions. Proceedings of the International Astronomical Union, 2010, 6, 483-486.	0.0	0
118	Electron beam generated whistler emissions in a laboratory plasma. AIP Conference Proceedings, 2015, , .	0.4	0
119	A megawatt solid-state modulator for high repetition rate pulse generation. Review of Scientific Instruments, 2016, 87, 023509.	1.3	0
120	Design, construction and utilization of a university plasma laboratory “ ERRATUM. Journal of Plasma Physics, 2020, 86, .	2.1	0
121	Collisionless interaction of an energetic laser produced plasma with a large magnetoplasma. , 2009, , 155-159.		0
122	10.1063/1.3562118.1. , 2011, , .		0
123	Preface: Non-equilibrium transport, interfaces, and mixing in plasmas. Physics of Plasmas, 2022, 29, 032103.	1.9	0
124	Topological Considerations in an Experiment on Locating Where Fully Three Dimensional Reconnection Occurs and Ion Energization Within It. , 2022, , .		0