

Marc Swisdak

List of Publications by Year in descending order

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122
papers

7,841
citations

44069

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docs citations

124
times ranked

2808
citing authors

#	ARTICLE	IF	CITATIONS
1	Laboratory Observations of Electron Heating and Non-Maxwellian Distributions at the Kinetic Scale during Electron-Only Magnetic Reconnection. <i>Physical Review Letters</i> , 2022, 128, 025002.	7.8	15
2	Flux Rope Merging and the Structure of Switchbacks in the Solar Wind. <i>Astrophysical Journal</i> , 2022, 925, 213.	4.5	11
3	Slow Shock Formation Upstream of Reconnecting Current Sheets. <i>Astrophysical Journal</i> , 2022, 926, 24.	4.5	1
4	Correlated Spatio-temporal Evolution of Extreme-Ultraviolet Ribbons and Hard X-Rays in a Solar Flare. <i>Astrophysical Journal</i> , 2022, 926, 218.	4.5	13
5	Electron-only reconnection and associated electron heating and acceleration in PHASMA. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	7
6	Characteristics of Multi-scale Current Sheets in the Solar Wind at 1 au Associated with Magnetic Reconnection and the Case for a Heliospheric Current Sheet Avalanche. <i>Astrophysical Journal</i> , 2022, 933, 181.	4.5	5
7	Electron Acceleration during Macroscale Magnetic Reconnection. <i>Physical Review Letters</i> , 2021, 126, 135101.	7.8	65
8	Data Mining Reconstruction of Magnetotail Reconnection and Implications for Its First-Principle Modeling. <i>Frontiers in Physics</i> , 2021, 9, .	2.1	19
9	Multiscale Nature of the Magnetotail Reconnection Onset. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093065.	4.0	11
10	Switchbacks as signatures of magnetic flux ropes generated by interchange reconnection in the corona. <i>Astronomy and Astrophysics</i> , 2021, 650, A2.	5.1	80
11	Particle-In-Cell Simulations of Magnetotail Dipolarizations Guided by Local Plasma Observations and Magnetometer Data Mining. , 2021, , .		0
12	The reversibility of magnetic reconnection. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	3
13	Whistler-regulated Magnetohydrodynamics: Transport Equations for Electron Thermal Conduction in the High- I^2 Intracluster Medium of Galaxy Clusters. <i>Astrophysical Journal</i> , 2021, 923, 245.	4.5	19
14	Noise-induced magnetic field saturation in kinetic simulations. <i>Journal of Plasma Physics</i> , 2020, 86, .	2.1	9
15	Estimating Effective Collision Frequency and Kinetic Entropy Uncertainty in Particle-in-Cell Simulations. <i>Journal of Physics: Conference Series</i> , 2020, 1620, 012009.	0.4	5
16	Electron Inflow Velocities and Reconnection Rates at Earth's Magnetopause and Magnetosheath. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089082.	4.0	23
17	Turbulence and Transport During Guide Field Reconnection at the Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027498.	2.4	7
18	Decomposition of plasma kinetic entropy into position and velocity space and the use of kinetic entropy in particle-in-cell simulations. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	20

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19	Particle heating and energy partition in low- β guide field reconnection with kinetic Riemann simulations. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	16
20	Transition from ion-coupled to electron-only reconnection: Basic physics and implications for plasma turbulence. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	61
21	A computational model for exploring particle acceleration during reconnection in macroscale systems. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	37
22	MMS Measurements of the Vlasov Equation: Probing the Electron Pressure Divergence Within Thin Current Sheets. <i>Geophysical Research Letters</i> , 2019, 46, 7862-7872.	4.0	19
23	Large-scale parallel electric fields and return currents in a global simulation model. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	15
24	Scattering of Energetic Electrons by Heat-flux-driven Whistlers in Flares. <i>Astrophysical Journal</i> , 2019, 887, 190.	4.5	22
25	Instabilities and turbulence in low- β guide field reconnection exhausts with kinetic Riemann simulations. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	6
26	Magnetic Reconnection in Three Dimensions: Modeling and Analysis of Electromagnetic Drift Waves in the Adjacent Current Sheet. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10085-10103.	2.4	18
27	Suppression of Electron Thermal Conduction by Whistler Turbulence in a Sustained Thermal Gradient. <i>Physical Review Letters</i> , 2018, 120, 035101.	7.8	44
28	Localized Oscillatory Energy Conversion in Magnetopause Reconnection. <i>Geophysical Research Letters</i> , 2018, 45, 1237-1245.	4.0	41
29	Characterizing Ion Flows Across a Magnetotail Dipolarization Jet. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 6326-6334.	2.4	4
30	Wave Generation and Heat Flux Suppression in Astrophysical Plasma Systems. <i>Astrophysical Journal</i> , 2018, 867, 154.	4.5	33
31	Localized and Intense Energy Conversion in the Diffusion Region of Asymmetric Magnetic Reconnection. <i>Geophysical Research Letters</i> , 2018, 45, 5260-5267.	4.0	26
32	Kinetic Dissipation Around a Dipolarization Front. <i>Geophysical Research Letters</i> , 2018, 45, 4639-4647.	4.0	42
33	The Twist of the Draped Interstellar Magnetic Field Ahead of the Heliopause: A Magnetic Reconnection Driven Rotational Discontinuity. <i>Astrophysical Journal Letters</i> , 2017, 839, L12.	8.3	26
34	Drift waves, intense parallel electric fields, and turbulence associated with asymmetric magnetic reconnection at the magnetopause. <i>Geophysical Research Letters</i> , 2017, 44, 2978-2986.	4.0	46
35	The Formation of Magnetic Depletions and Flux Annihilation Due to Reconnection in the Heliosheath. <i>Astrophysical Journal</i> , 2017, 837, 159.	4.5	15
36	Distinctive features of internally driven magnetotail reconnection. <i>Geophysical Research Letters</i> , 2017, 44, 3028-3037.	4.0	21

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37	Turbulence in Three-dimensional Simulations of Magnetopause Reconnection. Journal of Geophysical Research: Space Physics, 2017, 122, 11,086.	2.4	37
38	The role of three-dimensional transport in driving enhanced electron acceleration during magnetic reconnection. Physics of Plasmas, 2017, 24, 092110.	1.9	92
39	The Effect of a Guide Field on Local Energy Conversion During Asymmetric Magnetic Reconnection: Particle-in-Cell Simulations. Journal of Geophysical Research: Space Physics, 2017, 122, 11,523.	2.4	27
40	SUPPRESSION OF ELECTRON THERMAL CONDUCTION IN THE HIGH $\hat{\nu}^2$ INTRACLUSTER MEDIUM OF GALAXY CLUSTERS. Astrophysical Journal Letters, 2016, 830, L9.	8.3	54
41	Magnetized jets driven by the Sun: The structure of the heliosphere revisited—Updates. Physics of Plasmas, 2016, 23, .	1.9	13
42	Quantifying gyrotropy in magnetic reconnection. Geophysical Research Letters, 2016, 43, 43-49.	4.0	103
43	Parallel electric fields are inefficient drivers of energetic electrons in magnetic reconnection. Physics of Plasmas, 2016, 23, .	1.9	68
44	Particle-in-cell simulation study of the scaling of asymmetric magnetic reconnection with in-plane flow shear. Physics of Plasmas, 2016, 23, 082107.	1.9	8
45	MMS observations of large guide field symmetric reconnection between colliding reconnection jets at the center of a magnetic flux rope at the magnetopause. Geophysical Research Letters, 2016, 43, 5536-5544.	4.0	84
46	The effects of turbulence on three-dimensional magnetic reconnection at the magnetopause. Geophysical Research Letters, 2016, 43, 6020-6027.	4.0	80
47	Kinetic signatures of the region surrounding the X line in asymmetric (magnetopause) reconnection. Geophysical Research Letters, 2016, 43, 4145-4154.	4.0	106
48	Electron acceleration in three-dimensional magnetic reconnection with a guide field. Physics of Plasmas, 2015, 22, .	1.9	83
49	A MODEL OF THE HELIOSPHERE WITH JETS. Astrophysical Journal Letters, 2015, 808, L44.	8.3	43
50	Fast magnetic reconnection due to anisotropic electron pressure. Physics of Plasmas, 2015, 22, .	1.9	24
51	Magnetic reconnection, buoyancy, and flapping motions in magnetotail explosions. Journal of Geophysical Research: Space Physics, 2014, 119, 7151-7168.	2.4	64
52	DYNAMICS OF DOUBLE LAYERS, ION ACCELERATION, AND HEAT FLUX SUPPRESSION DURING SOLAR FLARES. Astrophysical Journal, 2014, 793, 7.	4.5	19
53	Electron heating during magnetic reconnection: A simulation scaling study. Physics of Plasmas, 2014, 21, .	1.9	74
54	The mechanisms of electron heating and acceleration during magnetic reconnection. Physics of Plasmas, 2014, 21, .	1.9	172

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55	The onset of ion heating during magnetic reconnection with a strong guide field. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	31
56	On the 3D structure and dissipation of reconnection-driven flow bursts. <i>Geophysical Research Letters</i> , 2014, 41, 3710-3716.	4.0	50
57	A POROUS, LAYERED HELIOPAUSE. <i>Astrophysical Journal Letters</i> , 2013, 774, L8.	8.3	44
58	von Kármán Energy Decay and Heating of Protons and Electrons in a Kinetic Turbulent Plasma. <i>Physical Review Letters</i> , 2013, 111, 121105.	7.8	57
59	Spontaneous formation of dipolarization fronts and reconnection onset in the magnetotail. <i>Geophysical Research Letters</i> , 2013, 40, 22-27.	4.0	87
60	The adiabatic phase mixing and heating of electrons in Buneman turbulence. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	18
61	The generation of random variates from a relativistic Maxwellian distribution. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	13
62	Influence of asymmetries and guide fields on the magnetic reconnection diffusion region in collisionless space plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 124001.	2.1	43
63	CORONAL ELECTRON CONFINEMENT BY DOUBLE LAYERS. <i>Astrophysical Journal</i> , 2013, 778, 144.	4.5	14
64	THE POWER-LAW SPECTRA OF ENERGETIC PARTICLES DURING MULTI-ISLAND MAGNETIC RECONNECTION. <i>Astrophysical Journal Letters</i> , 2013, 763, L5.	8.3	130
65	THE ROLE OF PRESSURE ANISOTROPY ON PARTICLE ACCELERATION DURING MAGNETIC RECONNECTION. <i>Astrophysical Journal</i> , 2013, 764, 126.	4.5	15
66	Axis and velocity determination for quasi two-dimensional plasma/field structures from Faraday's law: A second look. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 2073-2086.	2.4	8
67	SCALING OF THE GROWTH RATE OF MAGNETIC ISLANDS IN THE HELIOSHEATH. <i>Astrophysical Journal Letters</i> , 2012, 750, L30.	8.3	7
68	Ion Heating and Acceleration During Magnetic Reconnection Relevant to the Corona. <i>Space Science Reviews</i> , 2012, 172, 227-240.	8.1	33
69	Test of Shi et al. method to infer the magnetic reconnection geometry from spacecraft data: MHD simulation with guide field and antiparallel kinetic simulation. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	17
70	The structure of the magnetic reconnection exhaust boundary. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	67
71	The importance of plasma β^2 conditions for magnetic reconnection at Saturn's magnetopause. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	102
72	Correction to "Onset of collisionless magnetic reconnection in two-dimensional current sheets and formation of dipolarization fronts". <i>Journal of Geophysical Research</i> , 2012, 117, n/a-n/a.	3.3	0

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73	SUPPRESSION OF ENERGETIC ELECTRON TRANSPORT IN FLARES BY DOUBLE LAYERS. <i>Astrophysical Journal</i> , 2012, 757, 20.	4.5	24
74	Secondary Magnetic Islands Generated by the Kelvin-Helmholtz Instability in a Reconnecting Current Sheet. <i>Physical Review Letters</i> , 2012, 108, 255005.	7.8	63
75	Ion Heating and Acceleration During Magnetic Reconnection Relevant to the Corona. <i>Space Sciences Series of ISSI</i> , 2012, , 227-240.	0.0	0
76	THE EFFECTS OF PLASMA BETA AND ANISOTROPY INSTABILITIES ON THE DYNAMICS OF RECONNECTING MAGNETIC FIELDS IN THE HELIOSHEATH. <i>Astrophysical Journal</i> , 2011, 743, 70.	4.5	38
77	The effects of strong temperature anisotropy on the kinetic structure of collisionless slow shocks and reconnection exhausts. II. Theory. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	23
78	Comparison of a statistical model for magnetic islands in large current layers with Hall MHD simulations and Cluster FTE observations. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	42
79	Onset of collisionless magnetic reconnection in two-dimensional current sheets and formation of dipolarization fronts. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	71
80	A current filamentation mechanism for breaking magnetic field lines during reconnection. <i>Nature</i> , 2011, 474, 184-187.	27.8	137
81	The effects of strong temperature anisotropy on the kinetic structure of collisionless slow shocks and reconnection exhausts. I. Particle-in-cell simulations. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	25
82	THE ACCELERATION OF IONS IN SOLAR FLARES DURING MAGNETIC RECONNECTION. <i>Astrophysical Journal Letters</i> , 2011, 743, L35.	8.3	49
83	IS THE MAGNETIC FIELD IN THE HELIOSHEATH LAMINAR OR A TURBULENT SEA OF BUBBLES?. <i>Astrophysical Journal</i> , 2011, 734, 71.	4.5	71
84	A MAGNETIC RECONNECTION MECHANISM FOR THE GENERATION OF ANOMALOUS COSMIC RAYS. <i>Astrophysical Journal</i> , 2010, 709, 963-974.	4.5	239
85	THE VECTOR DIRECTION OF THE INTERSTELLAR MAGNETIC FIELD OUTSIDE THE HELIOSPHERE. <i>Astrophysical Journal</i> , 2010, 710, 1769-1775.	4.5	131
86	Three-dimensional simulations of the orientation and structure of reconnection X-lines. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	21
87	A statistical model of magnetic islands in a current layer. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	73
88	Electron holes and heating in the reconnection dissipation region. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	69
89	A simple MHD model for the formation of multiple dipolarization fronts. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	52
90	Test of methods to infer the magnetic reconnection geometry from spacecraft data. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	22

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91	The Weibel instability inside the electron-positron Harris sheet. <i>Physics of Plasmas</i> , 2009, 16, 042101.	1.9	9
92	Nonlinear Development of Streaming Instabilities in Strongly Magnetized Plasma. <i>Physical Review Letters</i> , 2009, 102, 145004.	7.8	47
93	Ion heating resulting from pickup in magnetic reconnection exhausts. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	151
94	Dipolarization fronts as a signature of transient reconnection in the magnetotail. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	272
95	A MAGNETIC RECONNECTION MECHANISM FOR ION ACCELERATION AND ABUNDANCE ENHANCEMENTS IN IMPULSIVE FLARES. <i>Astrophysical Journal</i> , 2009, 700, L16-L20.	4.5	153
96	Ultracold Plasma Expansion in a Magnetic Field. <i>Physical Review Letters</i> , 2008, 100, 235002.	7.8	39
97	The Hall fields and fast magnetic reconnection. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	168
98	Development of a Turbulent Outflow During Electron-Positron Magnetic Reconnection. <i>Astrophysical Journal</i> , 2008, 680, 999-1008.	4.5	38
99	Two-Scale Structure of the Electron Dissipation Region during Collisionless Magnetic Reconnection. <i>Physical Review Letters</i> , 2007, 99, 155002.	7.8	275
100	Reconnection onset in the magnetotail: Particle simulations with open boundary conditions. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	38
101	Atypical current sheets and plasma bubbles: A self-consistent kinetic model. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	11
102	Orientation of the reconnection X-line. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	82
103	Simulation study of a positive ionospheric storm phase observed at Millstone Hill. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	16
104	Structure and dynamics of a new class of thin current sheets. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	85
105	An interhemispheric model of artificial ionospheric ducts. <i>Radio Science</i> , 2006, 41, n/a-n/a.	1.6	23
106	Formation of secondary islands during magnetic reconnection. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	221
107	Electron acceleration from contracting magnetic islands during reconnection. <i>Nature</i> , 2006, 443, 553-556.	27.8	793
108	Hemispheric daytime ionospheric response to intense solar wind forcing. <i>Geophysical Monograph Series</i> , 2005, , 261-275.	0.1	8

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109	Production of Energetic Electrons during Magnetic Reconnection. Physical Review Letters, 2005, 94, 095001.	7.8	190
110	Shay and Swisdak Reply:. Physical Review Letters, 2005, 95, .	7.8	0
111	Cluster observations of electron holes in association with magnetotail reconnection and comparison to simulations. Journal of Geophysical Research, 2005, 110, .	3.3	251
112	Transition from antiparallel to component magnetic reconnection. Journal of Geophysical Research, 2005, 110, .	3.3	76
113	On the formation of a plasma bubble. Geophysical Research Letters, 2005, 32, .	4.0	17
114	The scaling of embedded collisionless reconnection. Physics of Plasmas, 2004, 11, 2199-2213.	1.9	126
115	Three-Species Collisionless Reconnection: Effect of O ⁺ on Magnetotail Reconnection. Physical Review Letters, 2004, 93, 175001.	7.8	92
116	A model of the bifurcated current sheet: 2. Flapping motions. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	36
117	Inherently three dimensional magnetic reconnection: A mechanism for bursty bulk flows?. Geophysical Research Letters, 2003, 30, .	4.0	84
118	Diamagnetic suppression of component magnetic reconnection at the magnetopause. Journal of Geophysical Research, 2003, 108, .	3.3	220
119	A model of the bifurcated current sheet. Geophysical Research Letters, 2003, 30, .	4.0	87
120	Formation of Electron Holes and Particle Energization During Magnetic Reconnection. Science, 2003, 299, 873-877.	12.6	374
121	Comment on "Creation of Magnetic Energy in the Solar Atmosphere". Physical Review Letters, 2001, 86, 1662-1662.	7.8	2
122	Effects of Large-Scale Convection on Mode Frequencies. Astrophysical Journal, 1999, 512, 442-453.	4.5	14