

Frederick D Wilder

List of Publications by Year in descending order

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87
papers

3,908
citations

136950

32
h-index

128289

60
g-index

90
all docs

90
docs citations

90
times ranked

2035
citing authors

#	ARTICLE	IF	CITATIONS
1	Electron-scale measurements of magnetic reconnection in space. <i>Science</i> , 2016, 352, aaf2939.	12.6	545
2	The Space Physics Environment Data Analysis System (SPEDAS). <i>Space Science Reviews</i> , 2019, 215, 9.	8.1	332
3	Electron magnetic reconnection without ion coupling in Earth's turbulent magnetosheath. <i>Nature</i> , 2018, 557, 202-206.	27.8	263
4	Electron-scale dynamics of the diffusion region during symmetric magnetic reconnection in space. <i>Science</i> , 2018, 362, 1391-1395.	12.6	221
5	Magnetospheric Multiscale observations of magnetic reconnection associated with Kelvin-Helmholtz waves. <i>Geophysical Research Letters</i> , 2016, 43, 5606-5615.	4.0	104
6	MMS observations of electron-scale filamentary currents in the reconnection exhaust and near the X line. <i>Geophysical Research Letters</i> , 2016, 43, 6060-6069.	4.0	99
7	Estimates of terms in Ohm's law during an encounter with an electron diffusion region. <i>Geophysical Research Letters</i> , 2016, 43, 5918-5925.	4.0	86
8	Observations of turbulence in a Kelvin-Helmholtz event on 8 September 2015 by the Magnetospheric Multiscale mission. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 11,021.	2.4	81
9	Magnetospheric Multiscale Dayside Reconnection Electron Diffusion Region Events. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 4858-4878.	2.4	79
10	Extended study of extreme geoelectric field event scenarios for geomagnetically induced current applications. <i>Space Weather</i> , 2013, 11, 121-131.	3.7	77
11	Magnetospheric Multiscale Observations of the Electron Diffusion Region of Large Guide Field Magnetic Reconnection. <i>Physical Review Letters</i> , 2016, 117, 015001.	7.8	74
12	Magnetic Reconnection, Turbulence, and Particle Acceleration: Observations in the Earth's Magnetotail. <i>Geophysical Research Letters</i> , 2018, 45, 3338-3347.	4.0	69
13	Magnetospheric Multiscale observations of large-amplitude, parallel, electrostatic waves associated with magnetic reconnection at the magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 5626-5634.	4.0	66
14	Magnetospheric Multiscale Satellites Observations of Parallel Electric Fields Associated with Magnetic Reconnection. <i>Physical Review Letters</i> , 2016, 116, 235102.	7.8	61
15	Observations of whistler mode waves with nonlinear parallel electric fields near the dayside magnetic reconnection separatrix by the Magnetospheric Multiscale mission. <i>Geophysical Research Letters</i> , 2016, 43, 5909-5917.	4.0	61
16	MMS Observations of Electrostatic Waves in an Oblique Shock Crossing. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9430-9442.	2.4	58
17	MMS Observations and Hybrid Simulations of Surface Ripples at a Marginally Quasi-Parallel Shock. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,003.	2.4	53
18	Energy limits of electron acceleration in the plasma sheet during substorms: A case study with the Magnetospheric Multiscale (MMS) mission. <i>Geophysical Research Letters</i> , 2016, 43, 7785-7794.	4.0	51

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19	Observations of Magnetic Reconnection in the Transition Region of Quasi-Parallel Shocks. <i>Geophysical Research Letters</i> , 2019, 46, 1177-1184.	4.0	51
20	Electron Heating at Kinetic Scales in Magnetosheath Turbulence. <i>Astrophysical Journal</i> , 2017, 836, 247.	4.5	50
21	Multispacecraft analysis of dipolarization fronts and associated whistler wave emissions using MMS data. <i>Geophysical Research Letters</i> , 2016, 43, 7279-7286.	4.0	49
22	Asymmetric magnetic reconnection with a flow shear and applications to the magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 7748-7763.	2.4	46
23	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
24	Whistler mode waves and Hall fields detected by MMS during a dayside magnetopause crossing. <i>Geophysical Research Letters</i> , 2016, 43, 5943-5952.	4.0	44
25	Multipoint Measurements of the Electron Jet of Symmetric Magnetic Reconnection with a Moderate Guide Field. <i>Physical Review Letters</i> , 2017, 118, 265101.	7.8	44
26	MMS Multipoint electric field observations of small-scale magnetic holes. <i>Geophysical Research Letters</i> , 2016, 43, 5953-5959.	4.0	42
27	Localized Oscillatory Energy Conversion in Magnetopause Reconnection. <i>Geophysical Research Letters</i> , 2018, 45, 1237-1245.	4.0	41
28	The Role of the Parallel Electric Field in Electron-scale Dissipation at Reconnecting Currents in the Magnetosheath. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 6533-6547.	2.4	40
29	Electron Bulk Acceleration and Thermalization at Earth's Quasiperpendicular Bow Shock. <i>Physical Review Letters</i> , 2018, 120, 225101.	7.8	38
30	Observations of Particle Acceleration in Magnetic Reconnection-driven Turbulence. <i>Astrophysical Journal</i> , 2020, 898, 154.	4.5	36
31	Signatures of complex magnetic topologies from multiple reconnection sites induced by Kelvin-Helmholtz instability. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 9926-9939.	2.4	35
32	Magnetic Reconnection at a Thin Current Sheet Separating Two Interlaced Flux Tubes at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1779-1793.	2.4	35
33	Magnetospheric Multiscale Instrument Suite Operations and Data System. <i>Space Science Reviews</i> , 2016, 199, 545-575.	8.1	33
34	Large-amplitude electric fields in the inner magnetosphere: Van Allen Probes observations of subauroral polarization streams. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 5294-5306.	2.4	32
35	Observation of high-frequency electrostatic waves in the vicinity of the reconnection ion diffusion region by the spacecraft of the Magnetospheric Multiscale (MMS) mission. <i>Geophysical Research Letters</i> , 2016, 43, 4808-4815.	4.0	32
36	Statistics of Reconnecting Current Sheets in the Transition Region of Earth's Bow Shock. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027119.	2.4	32

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37	Lower Hybrid Drift Waves and Electromagnetic Electron Space-Phase Holes Associated With Dipolarization Fronts and Field-Aligned Currents Observed by the Magnetospheric Multiscale Mission During a Substorm. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 12,236.	2.4	31
38	Large-Amplitude High-Frequency Waves at Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 2630-2657.	2.4	30
39	Ion Kinetics in a Hot Flow Anomaly: MMS Observations. <i>Geophysical Research Letters</i> , 2018, 45, 11,520.	4.0	28
40	Generation of Electron Whistler Waves at the Mirror Mode Magnetic Holes: MMS Observations and PIC Simulation. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 6383-6393.	2.4	27
41	Solar flare effects in the Earth's magnetosphere. <i>Nature Physics</i> , 2021, 17, 807-812.	16.7	27
42	Particle Acceleration in Strong Turbulence in the Earth's Magnetotail. <i>Astrophysical Journal</i> , 2020, 898, 153.	4.5	27
43	Observations of large-amplitude, parallel, electrostatic waves associated with the Kelvin-Helmholtz instability by the magnetospheric multiscale mission. <i>Geophysical Research Letters</i> , 2016, 43, 8859-8866.	4.0	26
44	The MMS Dayside Magnetic Reconnection Locations During Phase 1 and Their Relation to the Predictions of the Maximum Magnetic Shear Model. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,991.	2.4	26
45	The Properties of Ion Roars and Electron Dynamics in Mirror Mode Waves Observed by the Magnetospheric MultiScale Mission. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 93-103.	2.4	26
46	Reverse convection potential saturation during northward IMF. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	25
47	Intense dayside Joule heating during the 5 April 2010 geomagnetic storm recovery phase observed by AMIE and AMPERE. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	25
48	New Insights into the Nature of Turbulence in the Earth's Magnetosheath Using Magnetospheric MultiScale Mission Data. <i>Astrophysical Journal</i> , 2018, 859, 127.	4.5	23
49	Reverse convection potential saturation during northward IMF under various driving conditions. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	22
50	The nonlinear behavior of whistler waves at the reconnecting dayside magnetopause as observed by the Magnetospheric Multiscale mission: A case study. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5487-5501.	2.4	22
51	Energetic electron acceleration observed by MMS in the vicinity of an X-line crossing. <i>Geophysical Research Letters</i> , 2016, 43, 7356-7363.	4.0	21
52	The response time of the magnetopause reconnection location to changes in the solar wind: MMS case study. <i>Geophysical Research Letters</i> , 2016, 43, 4673-4682.	4.0	21
53	Effects of Fluctuating Magnetic Field on the Growth of the Kelvin-Helmholtz Instability at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027515.	2.4	21
54	A Survey of Plasma Waves Appearing Near Dayside Magnetopause Electron Diffusion Region Events. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 7837-7849.	2.4	20

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55	The nonlinear response of the polar cap potential under southward IMF: A statistical view. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	19
56	Wave Phenomena and Beam-Plasma Interactions at the Magnetopause Reconnection Region. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1118-1133.	2.4	19
57	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
58	Examining Coherency Scales, Substructure, and Propagation of Whistler Mode Chorus Elements With Magnetospheric Multiscale (MMS). <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,201.	2.4	18
59	Structure and Dissipation Characteristics of an Electron Diffusion Region Observed by MMS During a Rapid, Normal-Incidence Magnetopause Crossing. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,901.	2.4	18
60	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
61	Observation of a retreating x line and magnetic islands poleward of the cusp during northward interplanetary magnetic field conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9643-9657.	2.4	17
62	Ionospheric Joule heating, fast flow channels, and magnetic field line topology for IMF B_y -dominant conditions: Observations and comparisons with predicted reconnection jet speeds. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	16
63	Negative Potential Solitary Structures in the Magnetosheath With Large Parallel Width. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 132-145.	2.4	16
64	Impulsively Reflected Ions: A Plausible Mechanism for Ion Acoustic Wave Growth in Collisionless Shocks. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 1855-1865.	2.4	16
65	MMS SITL Ground Loop: Automating the Burst Data Selection Process. <i>Frontiers in Astronomy and Space Sciences</i> , 2020, 7, 54.	2.8	16
66	Polar cap electric field saturation during interplanetary magnetic field B_z north and south conditions. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	15
67	The role of magnetic flux tube deformation and magnetosheath plasma beta in the saturation of the Region 1 field-aligned current system. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 2036-2051.	2.4	13
68	Investigation of a rare event where the polar ionospheric reverse convection potential does not saturate during a period of extreme northward IMF solar wind driving. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 5422-5435.	2.4	12
69	Energy Conversion by Parallel Electric Fields During Guide Field Reconnection in Scaled Laboratory and Space Experiments. <i>Geophysical Research Letters</i> , 2018, 45, 12,677.	4.0	12
70	The Transition Between Antiparallel and Component Magnetic Reconnection at Earth's Dayside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 10,177.	2.4	12
71	Statistical Survey of Collisionless Dissipation in the Terrestrial Magnetosheath. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA029000.	2.4	12
72	Structure of Electron-Scale Plasma Mixing Along the Dayside Reconnection Separatrix. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 8788-8803.	2.4	11

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73	Field-aligned current reconfiguration and magnetospheric response to an impulse in the interplanetary magnetic field B_y component. <i>Geophysical Research Letters</i> , 2013, 40, 2489-2494.	4.0	10
74	On Multiple Hall-Like Electron Currents and Tripolar Guide Magnetic Field Perturbations During Kelvin-Helmholtz Waves. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1305-1324.	2.4	10
75	Interhemispheric observations of dayside convection under northward IMF. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	7
76	Investigation of the interhemispheric asymmetry in reverse convection near solstice during northward interplanetary magnetic field conditions using MHD simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 4289-4297.	2.4	7
77	Parallel Electrostatic Waves Associated With Turbulent Plasma Mixing in the Kelvin-Helmholtz Instability. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087837.	4.0	7
78	Magnetic Reconnection in Three Dimensions: Observations of Electromagnetic Drift Waves in the Adjacent Current Sheet. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10104-10118.	2.4	6
79	Investigation of the homogeneity of energy conversion processes at dipolarization fronts from MMS measurements. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	5
80	Statistical occurrence and dynamics of the Harang discontinuity during steady magnetospheric convection. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 5127-5135.	2.4	4
81	Electron-Scale Magnetic Structure Observed Adjacent to an Electron Diffusion Region at the Dayside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10153-10169.	2.4	4
82	Dual $E \times B$ flow responses in the dayside ionosphere to a sudden IMF By rotation. <i>Geophysical Research Letters</i> , 2017, 44, 6525-6533.	4.0	3
83	MMS Observations of Field Line Resonances Under Disturbed Solar Wind Conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028936.	2.4	2
84	The Occurrence and Prevalence of Time Domain Structures in the Kelvin-Helmholtz Instability at Different Positions Along the Earth's Magnetospheric Flanks. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 8, .	2.8	2
85	The Relative Importance of Geoeffective Length Versus Alfvén Wing Formation in the Saturation of the Ionospheric Reverse Convection Potential. <i>Geophysical Research Letters</i> , 2019, 46, 1126-1131.	4.0	1
86	Origin of Electron-Scale Magnetic Fluctuations Close to an Electron Diffusion Region. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA029046.	2.4	1
87	Mapping MMS Observations of Solitary Waves in Earth's Magnetic Field. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029389.	2.4	1