Xianzhe Jia

List of Publications by Year in descending order

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104 papers	3,060 citations	136950 32 h-index	182427 51 g-index
116 all docs	116 docs citations	116 times ranked	2025 citing authors

#	Article	IF	Citations
1	Evidence of a plume on Europa from Galileo magnetic and plasma wave signatures. Nature Astronomy, 2018, 2, 459-464.	10.1	164
2	The search for a subsurface ocean in Ganymede with Hubble Space Telescope observations of its auroral ovals. Journal of Geophysical Research: Space Physics, 2015, 120, 1715-1737.	2.4	128
3	MESSENGER observations of Mercury's dayside magnetosphere under extreme solar wind conditions. Journal of Geophysical Research: Space Physics, 2014, 119, 8087-8116.	2.4	125
4	Evidence of a Global Magma Ocean in Ioâ€™s Interior. Science, 2011, 332, 1186-1189.	12.6	115
5	Magnetospheric configuration and dynamics of Saturn's magnetosphere: A global MHD simulation. Journal of Geophysical Research, 2012, 117, .	3.3	103
6	Comparison of 3D kinetic and hydrodynamic models to ROSINA-COPS measurements of the neutral coma of 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A7.	5.1	93
7	Global MHD simulations of Mercury's magnetosphere with coupled planetary interior: Induction effect of the planetary conducting core on the global interaction. Journal of Geophysical Research: Space Physics, 2015, 120, 4763-4775.	2.4	89
8	Properties of Ganymede's magnetosphere inferred from improved threeâ€dimensional MHD simulations. Journal of Geophysical Research, 2009, 114, .	3.3	84
9	Threeâ€dimensional MHD simulations of Ganymedeâ€™s magnetosphere. Journal of Geophysical Research, 2008, 113, .	3.3	80
10	Extended magnetohydrodynamics with embedded particleâ€inâ€cell simulation of Ganymede's magnetosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 1273-1293.	2.4	78
11	Separation of the Magnetic Field into External andÂInternal Parts. Space Science Reviews, 2010, 152, 135-157.	8.1	73
12	Investigating Mercuryâ€™s Environment with the Two-Spacecraft BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	71
13	Driving Saturn's magnetospheric periodicities from the upper atmosphere/ionosphere: Magnetotail response to dual sources. Journal of Geophysical Research, 2012, 117, .	3.3	70
14	Global Threeâ€Dimensional Simulation of Earth's Dayside Reconnection Using a Twoâ€Way Coupled Magnetohydrodynamics With Embedded Particleâ€inâ€Cell Model: Initial Results. Journal of Geophysical Research: Space Physics, 2017, 122, 10,318.	2.4	62
15	Aurora on Ganymede. Journal of Geophysical Research: Space Physics, 2013, 118, 2043-2054.	2.4	58
16	Driving Saturn's magnetospheric periodicities from the upper atmosphere/ionosphere. Journal of Geophysical Research, 2012, 117, .	3.3	57
17	Mercury's crossâ€tail current sheet: Structure, Xâ€line location and stress balance. Geophysical Research Letters, 2017, 44, 678-686.	4.0	53
18	MESSENGER Observations of Disappearing Dayside Magnetosphere Events at Mercury. Journal of Geophysical Research: Space Physics, 2019, 124, 6613-6635.	2.4	53

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19	The H2O and O2 exospheres of Ganymede: The result of a complex interaction between the jovian magnetospheric ions and the icy moon. Icarus, 2015, 245, 306-319.	2.5	52
20	MESSENGER Observations and Global Simulations of Highly Compressed Magnetosphere Events at Mercury. Journal of Geophysical Research: Space Physics, 2019, 124, 229-247.	2.4	49
21	Auroral footprint of Ganymede. Journal of Geophysical Research, 2009, 114, .	3.3	44
22	Dynamics of Ganymede's magnetopause: Intermittent reconnection under steady external conditions. Journal of Geophysical Research, 2010, 115, .	3.3	44
23	Selfâ€consistent multifluid MHD simulations of Europa's exospheric interaction with Jupiter's magnetosphere. Journal of Geophysical Research: Space Physics, 2015, 120, 3503-3524.	2.4	44
24	Magnetic Fields of the Satellites of Jupiter and Saturn. Space Science Reviews, 2010, 152, 271-305.	8.1	41
25	Large-Scale Structure and Dynamics of the Magnetotails of Mercury, Earth, Jupiter and Saturn. Space Science Reviews, 2014, 182, 85-154.	8.1	41
26	Plasma Sources in Planetary Magnetospheres: Mercury. Space Science Reviews, 2015, 192, 91-144.	8.1	39
27	Flux transfer event observation at Saturn's dayside magnetopause by the Cassini spacecraft. Geophysical Research Letters, 2016, 43, 6713-6723.	4.0	38
28	Solar Wind and Internally Driven Dynamics: Influences on Magnetodiscs and Auroral Responses. Space Science Reviews, 2015, 187, 51-97.	8.1	36
29	Fourâ€fluid MHD simulations of the plasma and neutral gas environment of comet 67P/Churyumovâ€Gerasimenko near perihelion. Journal of Geophysical Research: Space Physics, 2016, 121, 4247-4268.	2.4	36
30	Towards a Global Unified Model of Europaâ€™s Tenuous Atmosphere. Space Science Reviews, 2018, 214, 1.	8.1	36
31	Cassini in situ observations of long-duration magnetic reconnection in Saturnâ€™s magnetotail. Nature Physics, 2016, 12, 268-271.	16.7	35
32	Interchange Injections at Saturn: Statistical Survey of Energetic H⁺ Sudden Flux Intensifications. Journal of Geophysical Research: Space Physics, 2018, 123, 4692-4711.	2.4	35
33	Effects of radial motion on interchange injections at Saturn. Icarus, 2016, 264, 342-351.	2.5	33
34	Comparative magnetotail flapping: an overview of selected events at Earth, Jupiter and Saturn. Annales Geophysicae, 2013, 31, 817-833.	1.6	32
35	What sustained multi-disciplinary research can achieve: The space weather modeling framework. Journal of Space Weather and Space Climate, 2021, 11, 42.	3.3	32
36	Evidence for periodic variations in the thickness of Saturn's nightside plasma sheet. Journal of Geophysical Research: Space Physics, 2017, 122, 280-292.	2.4	30

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37	MESSENGER observations of cusp plasma filaments at Mercury. Journal of Geophysical Research: Space Physics, 2016, 121, 8260-8285.	2.4	29
38	Coupling between Mercury and its nightside magnetosphere: Crossâ€tail current sheet asymmetry and substorm current wedge formation. Journal of Geophysical Research: Space Physics, 2017, 122, 8419-8433.	2.4	29
39	Studying Dawnâ€Dusk Asymmetries of Mercury's Magnetotail Using MHDâ€EPIC Simulations. Journal of Geophysical Research: Space Physics, 2019, 124, 8954-8973.	2.4	26
40	Saturn Plasma Sources and Associated Transport Processes. Space Science Reviews, 2015, 192, 237-283.	8.1	25
41	Plasmapause formation at Saturn. Journal of Geophysical Research: Space Physics, 2015, 120, 2571-2583.	2.4	25
42	Dawnâ€dusk asymmetries in rotating magnetospheres: Lessons from modeling Saturn. Journal of Geophysical Research: Space Physics, 2016, 121, 1413-1424.	2.4	24
43	Ion composition in interchange injection events in Saturn's magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 9761-9772.	2.4	23
44	Control of periodic variations in Saturn's magnetosphere by compressional waves. Journal of Geophysical Research: Space Physics, 2014, 119, 8030-8045.	2.4	23
45	Embedded Kinetic Simulation of Ganymede's Magnetosphere: Improvements and Inferences. Journal of Geophysical Research: Space Physics, 2019, 124, 5441-5460.	2.4	23
46	Flux Transfer Event Showers at Mercury: Dependence on Plasma Î² and Magnetic Shear and Their Contribution to the Dungey Cycle. Geophysical Research Letters, 2020, 47, e2020GL089784.	4.0	23
47	A multi-scale magnetotail reconnection event at Saturn and associated flows: Cassini/UVIS observations. Icarus, 2016, 263, 75-82.	2.5	21
48	Field dipolarization in Saturn's magnetotail with planetward ion flows and energetic particle flow bursts: Evidence of quasiâ€steady reconnection. Journal of Geophysical Research: Space Physics, 2015, 120, 3603-3617.	2.4	20
49	Kinetic Simulations of the Jovian Energetic Ion Circulation around Ganymede. Astrophysical Journal, 2020, 900, 74.	4.5	20
50	The magnetic structure of Saturn's magnetosheath. Journal of Geophysical Research: Space Physics, 2014, 119, 5651-5661.	2.4	19
51	MESSENGER observations of AlfvÃ©nic and compressional waves during Mercury's substorms. Geophysical Research Letters, 2015, 42, 6189-6198.	4.0	19
52	Jupiterâ€™s Magnetosphere: Plasma Sources and Transport. Space Science Reviews, 2015, 192, 209-236.	8.1	19
53	PFISR observation of intense ion upflow fluxes associated with an SED during the 1 June 2013 geomagnetic storm. Journal of Geophysical Research: Space Physics, 2017, 122, 2589-2604.	2.4	19
54	Global MHD simulations of the Response of Jupiter's Magnetosphere and Ionosphere to Changes in the Solar Wind and IMF. Journal of Geophysical Research: Space Physics, 2019, 124, 5317-5341.	2.4	19

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55	First 3D test particle model of Ganymede's ionosphere. Icarus, 2019, 330, 42-59.	2.5	19
56	Spinning, breathing, and flapping: Periodicities in Saturn's middle magnetosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 393-416.	2.4	18
57	Multiâ€Fluid MHD Simulations of Europa's Plasma Interaction Under Different Magnetospheric Conditions. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028888.	2.4	18
58	A Review of General Physical and Chemical Processes Related to Plasma Sources and Losses for Solar System Magnetospheres. Space Science Reviews, 2015, 192, 27-89.	8.1	16
59	Interplanetary shock interaction with the heliospheric current sheet and its associated structures. Journal of Geophysical Research, 2001, 106, 29299-29304.	3.3	15
60	Survey of Magnetosheath Plasma Properties at Saturn and Inference of Upstream Flow Conditions. Journal of Geophysical Research: Space Physics, 2018, 123, 2034-2053.	2.4	15
61	Loss rates of Europa×³s tenuous atmosphere. Planetary and Space Science, 2016, 130, 14-23.	1.7	14
62	Transport of Mass and Energy in Mercury's Plasma Sheet. Geophysical Research Letters, 2018, 45, 12,163.	4.0	14
63	A Comparative Study of the Proton Properties of Magnetospheric Substorms at Earth and Mercury in the Near Magnetotail. Geophysical Research Letters, 2018, 45, 7933-7941.	4.0	14
64	Simulations of ion sputtering at Ganymede. Icarus, 2020, 351, 113918.	2.5	14
65	MESSENGER Observations of Mercury's Nightside Magnetosphere Under Extreme Solar Wind Conditions: Reconnectionâ€Generated Structures and Steady Convection. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027490.	2.4	14
66	Incorporating Physical Knowledge Into Machine Learning for Planetary Space Physics. Frontiers in Astronomy and Space Sciences, 2020, 7, .	2.8	13
67	An MHD model of Ganymede's miniâ€magnetosphere suggests that the heliosphere forms in a subâ€AlfvÃ©nic flow. Journal of Geophysical Research: Space Physics, 2013, 118, 6839-6846.	2.4	12
68	Hall effect in the coma of 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2018, 475, 2835-2841.	4.4	12
69	Reconnectionâ€Driven Dynamics at Ganymede's Upstream Magnetosphere: 3â€D Global Hall MHD and MHDâ€EPIC Simulations. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028162.	2.4	12
70	Favorable Conditions for Magnetic Reconnection at Ganymede's Upstream Magnetopause. Geophysical Research Letters, 2020, 47, e2019GL086228.	4.0	12
71	Constraining Ganymede's neutral and plasma environments through simulations of its ionosphere and Galileo observations. Icarus, 2020, 343, 113691.	2.5	12
72	A NEW 3D MULTI-FLUID MODEL: A STUDY OF KINETIC EFFECTS AND VARIATIONS OF PHYSICAL CONDITIONS IN THE COMETARY COMA. Astrophysical Journal, 2016, 833, 160.	4.5	11

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73	Are Saturn's Interchange Injections Organized by Rotational Longitude?. Journal of Geophysical Research: Space Physics, 2019, 124, 1806-1822.	2.4	11
74	Magnetospheric Ion Bombardment of Europaâ€™s Surface. Planetary Science Journal, 2022, 3, 5.	3.6	10
75	Statistical Study of the Energetic Proton Environment at Titan's Orbit From the Cassini Spacecraft. Journal of Geophysical Research: Space Physics, 2018, 123, 4820-4834.	2.4	8
76	Largeâ€Amplitude Oscillatory Motion of Mercury's Crossâ€Tail Current Sheet. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027783.	2.4	8
77	Largeâ€scale solar wind flow around Saturn's nonaxisymmetric magnetosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 9198-9206.	2.4	7
78	Comment on â€œAn Active Plume Eruption on Europa During Galileo Flyby E26 as Indicated by Energetic Proton Depletionsâ€•by Huybrighs etÂal.. Geophysical Research Letters, 2021, 48, e2020GL091550.	4.0	7
79	MESSENGER Observations of Planetary Ion Enhancements at Mercury's Northern Magnetospheric Cusp During Flux Transfer Event Showers. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	7
80	ULF waves in Ganymede's upstream magnetosphere. Annales Geophysicae, 2013, 31, 45-59.	1.6	6
81	A possible mechanism for the formation of magnetic field dropouts in the coma of 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S468-S475.	4.4	6
82	Global Magnetohydrodynamic Simulations: Performance Quantification of Magnetopause Distances and Convection Potential Predictions. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	6
83	A New 3D Multi-fluid Dust Model: A Study of the Effects of Activity and Nucleus Rotation on Dust Grain Behavior at Comet 67P/Churyumovâ€“Gerasimenko. Astrophysical Journal, 2017, 850, 72.	4.5	5
84	Magnetohydrodynamic modelling of starâ€“planet interaction and associated auroral radio emission. Monthly Notices of the Royal Astronomical Society, 2020, 494, 5044-5055.	4.4	5
85	The latitudinal structure of the nightside outer magnetosphere of Saturn as revealed by velocity moments of thermal ions. Annales Geophysicae, 2015, 33, 1195-1202.	1.6	4
86	Magnetic Flux Circulation in the Saturnian Magnetosphere as Constrained by Cassini Observations in the Inner Magnetosphere. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029304.	2.4	4
87	Energy-banded ions in Saturn's magnetosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 5181-5202.	2.4	3
88	The Mysterious Periodicities of Saturn. , 2018, , 97-125.		3
89	Juno Observations of Ionâ€Inertial Scale Flux Ropes in the Jovian Magnetotail. Geophysical Research Letters, 2021, 48, e2020GL089721.	4.0	3
90	Properties of Ionâ€Inertial Scale Plasmoids Observed by the Juno Spacecraft in the Jovian Magnetotail. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	3

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91	Simulation Studies of Plasma Transport at Earth, Jupiter and Saturn. Astrophysics and Space Science Library, 2016, , 345-372.	2.7	2
92	Coupled SKR Emissions in Saturn's Northern and Southern Ionospheres. Geophysical Research Letters, 2018, 45, 2893-2900.	4.0	2
93	Global Configuration and Seasonal Variations of Saturnâ€™s Magnetosphere. , 2018, , 126-165.		2
94	Analytical Assessment of Kelvinâ€Helmholtz Instability Growth at Ganymede's Upstream Magnetopause. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029338.	2.4	2
95	Separation of the Magnetic Field into External andÂInternal Parts. Space Sciences Series of ISSI, 2009, , 135-157.	0.0	2
96	Solar Wind and Internally Driven Dynamics: Influences on Magnetodiscs and Auroral Responses. Space Sciences Series of ISSI, 2016, , 51-97.	0.0	2
97	A 3D MHDâ€Particle Tracing Model of Na⁺ Energization on Mercury's Dayside. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029587.	2.4	2
98	Neptuneâ€™s Pole-on Magnetosphere: Dayside Reconnection Observations by Voyager 2. Planetary Science Journal, 2022, 3, 76.	3.6	2
99	Magnetic Fields of the Satellites of Jupiter and Saturn. Space Sciences Series of ISSI, 2009, , 271-305.	0.0	1
100	Saturn Plasma Sources and Associated Transport Processes. Space Sciences Series of ISSI, 2016, , 237-283.	0.0	1
101	Medicean Moons Sailing Through Plasma Seas: Challenges in Establishing Magnetic Properties. Proceedings of the International Astronomical Union, 2010, 6, 58-70.	0.0	0
102	A Review of General Physical and Chemical Processes Related to Plasma Sources and Losses for Solar System Magnetospheres. Space Sciences Series of ISSI, 2016, , 27-89.	0.0	0
103	Jupiterâ€™s Magnetosphere: Plasma Sources and Transport. Space Sciences Series of ISSI, 2016, , 209-236.	0.0	0
104	Plasma Sources in Planetary Magnetospheres: Mercury. Space Sciences Series of ISSI, 2016, , 91-144.	0.0	0