Xiaohua Fang

List of Publications by Year
in descending order

75 papers	3,457 citations	159358 30 h-index	143772 57 g-index
80 all docs	80 docs citations	80 times ranked	1905 citing authors

#	Article	IF	Citations
1	Martian nonmigrating atmospheric tides in the thermosphere and ionosphere at solar minimum. Icarus, 2023, 393, 114767.	1.1	2
2	Marsâ€™ plasma system. Scientific potential of coordinated multipoint missions: â€œThe next generationâ€. Experimental Astronomy, 2022, 54, 641-676.	1.6	9
3	Discrete Aurora on the Nightside of Mars: Occurrence Location and Probability. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	6
4	The Origins of Longâ€Term Variability in Martian Upper Atmospheric Densities. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	6
5	Discrete Aurora at Mars: Dependence on Upstream Solar Wind Conditions. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	7
6	The Influence of Crustal Magnetic Fields on the Martian Bow Shock Location: A Statistical Analysis of MAVEN and Mars Express Observations. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	5
7	The Drivers of the Martian Bow Shock Location: A Statistical Analysis of Mars Atmosphere and Volatile EvolutioN and Mars Express Observations. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	14
8	Tidal Effects on the Longitudinal Structures of the Martian Thermosphere and Topside Ionosphere Observed by MAVEN. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028562.	0.8	12
9	Impact of the 2018 Mars Global Dust Storm on the Ionospheric Peak: A Study Using a Photochemical Model. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006823.	1.5	7
10	MOSAIC: A Satellite Constellation to Enable Groundbreaking Mars Climate System Science and Prepare for Human Exploration. Planetary Science Journal, 2021, 2, 211.	1.5	6
11	Mars Dust Storm Effects in the Ionosphere and Magnetosphere and Implications for Atmospheric Carbon Loss. Journal of Geophysical Research: Space Physics, 2020, 125, no.	0.8	23
12	A Generalized Method for Calculating Atmospheric Ionization by Energetic Electron Precipitation. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028482.	0.8	24
13	Tidal Wave-Driven Variability in the Mars Ionosphere-Thermosphere System. Atmosphere, 2020, 11, 521.	1.0	14
14	Effects of Global and Regional Dust Storms on the Martian Hot O Corona and Photochemical Loss. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027115.	0.8	15
15	Mars Upper Atmospheric Responses to the 10 September 2017 Solar Flare: A Global, Timeâ€Dependent Simulation. Geophysical Research Letters, 2019, 46, 9334-9343.	1.5	19
16	Importance of Ambipolar Electric Field in Driving Ion Loss From Mars: Results From a Multifluid MHD Model With the Electron Pressure Equation Included. Journal of Geophysical Research: Space Physics, 2019, 124, 9040-9057.	0.8	27
17	Magnetic Field in the Martian Magnetosheath and the Application as an IMF Clock Angle Proxy. Journal of Geophysical Research: Space Physics, 2019, 124, 4295-4313.	0.8	16
18	Atmospheric Effects of >30â€keV Energetic Electron Precipitation in the Southern Hemisphere Winter During 2003. Journal of Geophysical Research: Space Physics, 2019, 124, 8138-8153.	0.8	24

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19	Effects of Energetic Electron and Proton Precipitations on Thermospheric Nitric Oxide Cooling During Shockâ€Led Interplanetary Coronal Mass Ejections. Journal of Geophysical Research: Space Physics, 2019, 124, 8125-8137.	0.8	3
20	The Propitious Role of Solar Energetic Particles in the Origin of Life. Astrophysical Journal, 2018, 853, 10.	1.6	29
21	On the Effects of Bremsstrahlung Radiation During Energetic Electron Precipitation. Geophysical Research Letters, 2018, 45, 1167-1176.	1.5	29
22	The Morphology of the Solar Wind Magnetic Field Draping on the Dayside of Mars and Its Variability. Geophysical Research Letters, 2018, 45, 3356-3365.	1.5	39
23	Reconnection in the Martian Magnetotail: Hallâ€<scp>MHD</scp> With Embedded Particleâ€inâ€Cell Simulations. Journal of Geophysical Research: Space Physics, 2018, 123, 3742-3763.	0.8	20
24	Investigation of Martian Magnetic Topology Response to 2017 September ICME. Geophysical Research Letters, 2018, 45, 7337-7346.	1.5	39
25	A Proxy for the Upstream IMF Clock Angle Using MAVEN Magnetic Field Data. Journal of Geophysical Research: Space Physics, 2018, 123, 9612-9618.	0.8	6
26	Solar Wind Interaction With the Martian Upper Atmosphere: Roles of the Cold Thermosphere and Hot Oxygen Corona. Journal of Geophysical Research: Space Physics, 2018, 123, 6639-6654.	0.8	14
27	Modeling Martian Atmospheric Losses over Time: Implications for Exoplanetary Climate Evolution and Habitability. Astrophysical Journal Letters, 2018, 859, L14.	3.0	51
28	The Impact and Solar Wind Proxy of the 2017 September ICME Event at Mars. Geophysical Research Letters, 2018, 45, 7248-7256.	1.5	29
29	Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. Icarus, 2018, 315, 146-157.	1.1	216
30	Discovery of a proton aurora at Mars. Nature Astronomy, 2018, 2, 802-807.	4.2	50
31	Martian lowâ€altitude magnetic topology deduced from MAVEN/SWEA observations. Journal of Geophysical Research: Space Physics, 2017, 122, 1831-1852.	0.8	107
32	Seasonal variability of Martian ion escape through the plume and tail from MAVEN observations. Journal of Geophysical Research: Space Physics, 2017, 122, 4009-4022.	0.8	66
33	Highâ€Altitude Closed Magnetic Loops at Mars Observed by MAVEN. Geophysical Research Letters, 2017, 44, 11,229.	1.5	26
34	The Mars crustal magnetic field control of plasma boundary locations and atmospheric loss: MHD prediction and comparison with MAVEN. Journal of Geophysical Research: Space Physics, 2017, 122, 4117-4137.	0.8	60
35	Statistical analysis of the reflection of incident O⁺ pickup ions at Mars: MAVEN observations. Journal of Geophysical Research: Space Physics, 2017, 122, 4089-4101.	0.8	11
36	Variations of the Martian plasma environment during the ICME passage on 8 March 2015: A timeâ€dependent MHD study. Journal of Geophysical Research: Space Physics, 2017, 122, 1714-1730.	0.8	40

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37	O⁺ ion beams reflected below the Martian bow shock: MAVEN observations. Journal of Geophysical Research: Space Physics, 2016, 121, 3093-3107.	0.8	13
38	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. Space Science Reviews, 2015, 195, 357-422.	3.7	99
39	Response of Mars O⁺ pickup ions to the 8 March 2015 ICME: Inferences from MAVEN dataâ€based models. Geophysical Research Letters, 2015, 42, 9095-9102.	1.5	47
40	A climatology of planetary waveâ€driven mesospheric inversion layers in the extratropical winter. Journal of Geophysical Research D: Atmospheres, 2015, 120, 399-413.	1.2	17
41	Control of Mars global atmospheric loss by the continuous rotation of the crustal magnetic field: A timeâ€dependent MHD study. Journal of Geophysical Research: Space Physics, 2015, 120, 10,926.	0.8	61
42	Strong plume fluxes at Mars observed by MAVEN: An important planetary ion escape channel. Geophysical Research Letters, 2015, 42, 8942-8950.	1.5	143
43	A fast, parameterized model of upper atmospheric ionization rates, chemistry, and conductivity. Journal of Geophysical Research: Space Physics, 2015, 120, 4936-4949.	0.8	18
44	Electron impact ionization in the Martian atmosphere: Interplay between scattering and crustal magnetic field effects. Journal of Geophysical Research E: Planets, 2015, 120, 1332-1345.	1.5	30
45	MHD model results of solar wind interaction with Mars and comparison with MAVEN plasma observations. Geophysical Research Letters, 2015, 42, 9113-9120.	1.5	58
46	The spatial distribution of planetary ion fluxes near Mars observed by MAVEN. Geophysical Research Letters, 2015, 42, 9142-9148.	1.5	115
47	Statistical studies on Mars atmospheric sputtering by precipitating pickup O⁺: Preparation for the MAVEN mission. Journal of Geophysical Research E: Planets, 2015, 120, 34-50.	1.5	26
48	The Mars Atmosphere and Volatile Evolution (MAVEN) Mission. Space Science Reviews, 2015, 195, 3-48.	3.7	563
49	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. Science, 2015, 350, aad0210.	6.0	166
50	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. Science, 2015, 350, aad0459.	6.0	90
51	Martian ionospheric responses to dynamic pressure enhancements in the solar wind. Journal of Geophysical Research: Space Physics, 2014, 119, 1272-1286.	0.8	59
52	Ionization due to electron and proton precipitation during the August 2011 storm. Journal of Geophysical Research: Space Physics, 2014, 119, 3106-3116.	0.8	14
53	Solar filament impact on 21 January 2005: Geospace consequences. Journal of Geophysical Research: Space Physics, 2014, 119, 5401-5448.	0.8	20
54	Modeling of the O⁺ pickup ion sputtering efficiency dependence on solar wind conditions for the Martian atmosphere. Journal of Geophysical Research E: Planets, 2014, 119, 93-108.	1.5	23

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55	Test particle comparison of heavy atomic and molecular ion distributions at Mars. Journal of Geophysical Research: Space Physics, 2014, 119, 2328-2344.	0.8	21
56	Effects of crustal field rotation on the solar wind plasma interaction with Mars. Geophysical Research Letters, 2014, 41, 6563-6569.	1.5	80
57	Comparison of highâ€altitude production and ionospheric outflow contributions to O⁺ loss at Mars. Journal of Geophysical Research: Space Physics, 2013, 118, 4093-4107.	0.8	9
58	Proton impact ionization and a fast calculation method. Journal of Geophysical Research: Space Physics, 2013, 118, 5369-5378.	0.8	27
59	Simulated kinetic effects of the corona and solar cycle on high altitude ion transport at Mars. Journal of Geophysical Research: Space Physics, 2013, 118, 3700-3711.	0.8	11
60	The influence of production mechanisms on pickâ€up ion loss at Mars. Journal of Geophysical Research: Space Physics, 2013, 118, 554-569.	0.8	31
61	The importance of pickup oxygen ion precipitation to the Mars upper atmosphere under extreme solar wind conditions. Geophysical Research Letters, 2013, 40, 1922-1927.	1.5	45
62	Oxygen ion precipitation in the Martian atmosphere and its relation with the crustal magnetic fields. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	12
63	A comparison of global models for the solar wind interaction with Mars. Icarus, 2010, 206, 139-151.	1.1	108
64	On the effect of the martian crustal magnetic field on atmospheric erosion. Icarus, 2010, 206, 130-138.	1.1	57
65	Escape probability of Martian atmospheric ions: Controlling effects of the electromagnetic fields. Journal of Geophysical Research, 2010, 115, .	3.3	36
66	Parameterization of monoenergetic electron impact ionization. Geophysical Research Letters, 2010, 37, .	1.5	93
67	Pickup oxygen ion velocity space and spatial distribution around Mars. Journal of Geophysical Research, 2008, 113, .	3.3	80
68	Electron impact ionization: A new parameterization for 100 eV to 1 MeV electrons. Journal of Geophysical Research, 2008, 113, .	3.3	84
69	Global 30-240 keV proton precipitation in the 17-18 April 2002 geomagnetic storms: 1. Patterns. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	25
70	Global 30-240 keV proton precipitation in the 17-18 April 2002 geomagnetic storms: 2. Conductances and beam spreading. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	16
71	Global 30â€“240 keV proton precipitation in the 17â€“18 April 2002 geomagnetic storms: 3. Impact on the ionosphere and thermosphere. Journal of Geophysical Research, 2007, 112, .	3.3	13
72	Mars Global MHD Predictions of Magnetic Connectivity Between the Dayside Ionosphere and the Magnetospheric Flanks. Space Science Reviews, 2007, 126, 63-76.	3.7	31

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73	Study of the proton arc spreading effect on primary ionization rates. Journal of Geophysical Research, 2005, 110, .	3.3	12
74	Hot carbon densities in the exosphere of Venus. Journal of Geophysical Research, 2004, 109, .	3.3	3
75	Quantification of the spreading effect of auroral proton precipitation. Journal of Geophysical Research, 2004, 109, .	3.3	22