

# Xiaohua Fang

## List of Publications by Year in descending order

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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	The Mars Atmosphere and Volatile Evolution (MAVEN) Mission. <i>Space Science Reviews</i> , 2015, 195, 3-48.	3.7	563
2	Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. <i>Icarus</i> , 2018, 315, 146-157.	1.1	216
3	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. <i>Science</i> , 2015, 350, aad0210.	6.0	166
4	Strong plume fluxes at Mars observed by MAVEN: An important planetary ion escape channel. <i>Geophysical Research Letters</i> , 2015, 42, 8942-8950.	1.5	143
5	The spatial distribution of planetary ion fluxes near Mars observed by MAVEN. <i>Geophysical Research Letters</i> , 2015, 42, 9142-9148.	1.5	115
6	A comparison of global models for the solar wind interaction with Mars. <i>Icarus</i> , 2010, 206, 139-151.	1.1	108
7	Martian low-altitude magnetic topology deduced from MAVEN/SWEA observations. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 1831-1852.	0.8	107
8	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. <i>Space Science Reviews</i> , 2015, 195, 357-422.	3.7	99
9	Parameterization of monoenergetic electron impact ionization. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	93
10	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. <i>Science</i> , 2015, 350, aad0459.	6.0	90
11	Electron impact ionization: A new parameterization for 100 eV to 1 MeV electrons. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	84
12	Pickup oxygen ion velocity space and spatial distribution around Mars. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	80
13	Effects of crustal field rotation on the solar wind plasma interaction with Mars. <i>Geophysical Research Letters</i> , 2014, 41, 6563-6569.	1.5	80
14	Seasonal variability of Martian ion escape through the plume and tail from MAVEN observations. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 4009-4022.	0.8	66
15	Control of Mars global atmospheric loss by the continuous rotation of the crustal magnetic field: A time-dependent MHD study. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 10,926.	0.8	61
16	The Mars crustal magnetic field control of plasma boundary locations and atmospheric loss: MHD prediction and comparison with MAVEN. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 4117-4137.	0.8	60
17	Martian ionospheric responses to dynamic pressure enhancements in the solar wind. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 1272-1286.	0.8	59
18	MHD model results of solar wind interaction with Mars and comparison with MAVEN plasma observations. <i>Geophysical Research Letters</i> , 2015, 42, 9113-9120.	1.5	58

#	ARTICLE	IF	CITATIONS
19	On the effect of the martian crustal magnetic field on atmospheric erosion. <i>Icarus</i> , 2010, 206, 130-138.	1.1	57
20	Modeling Martian Atmospheric Losses over Time: Implications for Exoplanetary Climate Evolution and Habitability. <i>Astrophysical Journal Letters</i> , 2018, 859, L14.	3.0	51
21	Discovery of a proton aurora at Mars. <i>Nature Astronomy</i> , 2018, 2, 802-807.	4.2	50
22	Response of Mars O <sup>+</sup> pickup ions to the 8 March 2015 ICME: Inferences from MAVEN data-based models. <i>Geophysical Research Letters</i> , 2015, 42, 9095-9102.	1.5	47
23	The importance of pickup oxygen ion precipitation to the Mars upper atmosphere under extreme solar wind conditions. <i>Geophysical Research Letters</i> , 2013, 40, 1922-1927.	1.5	45
24	Variations of the Martian plasma environment during the ICME passage on 8 March 2015: A time-dependent MHD study. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 1714-1730.	0.8	40
25	The Morphology of the Solar Wind Magnetic Field Draping on the Dayside of Mars and Its Variability. <i>Geophysical Research Letters</i> , 2018, 45, 3356-3365.	1.5	39
26	Investigation of Martian Magnetic Topology Response to 2017 September ICME. <i>Geophysical Research Letters</i> , 2018, 45, 7337-7346.	1.5	39
27	Escape probability of Martian atmospheric ions: Controlling effects of the electromagnetic fields. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	36
28	Mars Global MHD Predictions of Magnetic Connectivity Between the Dayside Ionosphere and the Magnetospheric Flanks. <i>Space Science Reviews</i> , 2007, 126, 63-76.	3.7	31
29	The influence of production mechanisms on pick-up ion loss at Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 554-569.	0.8	31
30	Electron impact ionization in the Martian atmosphere: Interplay between scattering and crustal magnetic field effects. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 1332-1345.	1.5	30
31	The Propitious Role of Solar Energetic Particles in the Origin of Life. <i>Astrophysical Journal</i> , 2018, 853, 10.	1.6	29
32	On the Effects of Bremsstrahlung Radiation During Energetic Electron Precipitation. <i>Geophysical Research Letters</i> , 2018, 45, 1167-1176.	1.5	29
33	The Impact and Solar Wind Proxy of the 2017 September ICME Event at Mars. <i>Geophysical Research Letters</i> , 2018, 45, 7248-7256.	1.5	29
34	Proton impact ionization and a fast calculation method. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 5369-5378.	0.8	27
35	Importance of Ambipolar Electric Field in Driving Ion Loss From Mars: Results From a Multifluid MHD Model With the Electron Pressure Equation Included. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 9040-9057.	0.8	27
36	Statistical studies on Mars atmospheric sputtering by precipitating pickup O <sup>+</sup> : Preparation for the MAVEN mission. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 34-50.	1.5	26

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37	High-Altitude Closed Magnetic Loops at Mars Observed by MAVEN. <i>Geophysical Research Letters</i> , 2017, 44, 11,229.	1.5	26
38	Global 30-240 keV proton precipitation in the 17-18 April 2002 geomagnetic storms: 1. Patterns. <i>Journal of Geophysical Research</i> , 2007, 112, n/a-n/a.	3.3	25
39	Atmospheric Effects of >30-keV Energetic Electron Precipitation in the Southern Hemisphere Winter During 2003. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 8138-8153.	0.8	24
40	A Generalized Method for Calculating Atmospheric Ionization by Energetic Electron Precipitation. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028482.	0.8	24
41	Modeling of the O <sup>+</sup> pickup ion sputtering efficiency dependence on solar wind conditions for the Martian atmosphere. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 93-108.	1.5	23
42	Mars Dust Storm Effects in the Ionosphere and Magnetosphere and Implications for Atmospheric Carbon Loss. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, no.	0.8	23
43	Quantification of the spreading effect of auroral proton precipitation. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	22
44	Test particle comparison of heavy atomic and molecular ion distributions at Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2328-2344.	0.8	21
45	Solar filament impact on 21 January 2005: Geospace consequences. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5401-5448.	0.8	20
46	Reconnection in the Martian Magnetotail: Hall-MHD With Embedded Particle-in-Cell Simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 3742-3763.	0.8	20
47	Mars Upper Atmospheric Responses to the 10 September 2017 Solar Flare: A Global, Time-Dependent Simulation. <i>Geophysical Research Letters</i> , 2019, 46, 9334-9343.	1.5	19
48	A fast, parameterized model of upper atmospheric ionization rates, chemistry, and conductivity. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 4936-4949.	0.8	18
49	A climatology of planetary wave-driven mesospheric inversion layers in the extratropical winter. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 399-413.	1.2	17
50	Global 30-240 keV proton precipitation in the 17-18 April 2002 geomagnetic storms: 2. Conductances and beam spreading. <i>Journal of Geophysical Research</i> , 2007, 112, n/a-n/a.	3.3	16
51	Magnetic Field in the Martian Magnetosheath and the Application as an IMF Clock Angle Proxy. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 4295-4313.	0.8	16
52	Effects of Global and Regional Dust Storms on the Martian Hot O Corona and Photochemical Loss. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027115.	0.8	15
53	Ionization due to electron and proton precipitation during the August 2011 storm. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 3106-3116.	0.8	14
54	Solar Wind Interaction With the Martian Upper Atmosphere: Roles of the Cold Thermosphere and Hot Oxygen Corona. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 6639-6654.	0.8	14

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55	Tidal Wave-Driven Variability in the Mars Ionosphere-Thermosphere System. <i>Atmosphere</i> , 2020, 11, 521.	1.0	14
56	The Drivers of the Martian Bow Shock Location: A Statistical Analysis of Mars Atmosphere and Volatile Evolution and Mars Express Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	14
57	Global 30–240 keV proton precipitation in the 17–18 April 2002 geomagnetic storms: 3. Impact on the ionosphere and thermosphere. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	13
58	O <sup>+</sup> ion beams reflected below the Martian bow shock: MAVEN observations. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 3093-3107.	0.8	13
59	Study of the proton arc spreading effect on primary ionization rates. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	12
60	Oxygen ion precipitation in the Martian atmosphere and its relation with the crustal magnetic fields. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	12
61	Tidal Effects on the Longitudinal Structures of the Martian Thermosphere and Topside Ionosphere Observed by MAVEN. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028562.	0.8	12
62	Simulated kinetic effects of the corona and solar cycle on high altitude ion transport at Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 3700-3711.	0.8	11
63	Statistical analysis of the reflection of incident O <sup>+</sup> pickup ions at Mars: MAVEN observations. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 4089-4101.	0.8	11
64	Comparison of high-altitude production and ionospheric outflow contributions to O <sup>+</sup> loss at Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 4093-4107.	0.8	9
65	Mars™ plasma system. Scientific potential of coordinated multipoint missions: “The next generation” <i>Experimental Astronomy</i> , 2022, 54, 641-676.	1.6	9
66	Impact of the 2018 Mars Global Dust Storm on the Ionospheric Peak: A Study Using a Photochemical Model. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006823.	1.5	7
67	Discrete Aurora at Mars: Dependence on Upstream Solar Wind Conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	7
68	A Proxy for the Upstream IMF Clock Angle Using MAVEN Magnetic Field Data. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9612-9618.	0.8	6
69	MOSAIC: A Satellite Constellation to Enable Groundbreaking Mars Climate System Science and Prepare for Human Exploration. <i>Planetary Science Journal</i> , 2021, 2, 211.	1.5	6
70	Discrete Aurora on the Nightside of Mars: Occurrence Location and Probability. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	6
71	The Origins of Long-Term Variability in Martian Upper Atmospheric Densities. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	6
72	The Influence of Crustal Magnetic Fields on the Martian Bow Shock Location: A Statistical Analysis of MAVEN and Mars Express Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	5

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73	Hot carbon densities in the exosphere of Venus. Journal of Geophysical Research, 2004, 109, .	3.3	3
74	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
75	Martian nonmigrating atmospheric tides in the thermosphere and ionosphere at solar minimum. Icarus, 2023, 393, 114767.	1.1	2