

Manish Patel

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

2,086
citations

218677

26
h-index

265206

42
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99
all docs

99
docs citations

99
times ranked

1312
citing authors

#	ARTICLE	IF	CITATIONS
1	Seismic constraints from a Mars impact experiment using InSight and Perseverance. <i>Nature Astronomy</i> , 2022, 6, 59-64.	10.1	9
2	Removal of straylight from ExoMars NOMAD-UVIS observations. <i>Planetary and Space Science</i> , 2022, 218, 105432.	1.7	3
3	Calibration of NOMAD on ExoMars Trace Gas Orbiter: Part 3 - LNO validation and instrument stability. <i>Planetary and Space Science</i> , 2022, 218, 105399.	1.7	4
4	A CaSSIS and HiRISE map of the Clay-bearing Unit at the ExoMars 2022 landing site in Oxia Planum. <i>Planetary and Space Science</i> , 2022, 214, 105429.	1.7	6
5	Calibration of NOMAD on ESA's ExoMars Trace Gas Orbiter: Part 1 – The Solar Occultation channel. <i>Planetary and Space Science</i> , 2022, 218, 105411.	1.7	8
6	Vertical Aerosol Distribution and Mesospheric Clouds From ExoMars UVIS. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	6
7	Martian CO ₂ Ice Observation at High Spectral Resolution With ExoMars/TGO NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	5
8	Calibration of the NOMAD-UVIS data. <i>Planetary and Space Science</i> , 2022, 218, 105504.	1.7	5
9	Variations in Vertical CO ₂ Profiles in the Martian Mesosphere and Lower Thermosphere Measured by the ExoMars TGO/NOMAD: Implications of Variations in Eddy Diffusion Coefficient. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	7
10	Density and Temperature of the Upper Mesosphere and Lower Thermosphere of Mars Retrieved From the OI 557.7Ånm Dayglow Measured by TGO/NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	6
11	The Mars Oxygen Visible Dayglow: A Martian Year of NOMAD/UVIS Observations. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	2
12	Planet-Wide Ozone Destruction in the Middle Atmosphere on Mars During Global Dust Storm. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	7
13	The Deuterium Isotopic Ratio of Water Released From the Martian Caps as Measured With TGO/NOMAD. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	15
14	Comprehensive investigation of Mars methane and organics with ExoMars/NOMAD. <i>Icarus</i> , 2021, 357, 114266.	2.5	27
15	Machine learning for automatic identification of new minor species. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 259, 107361.	2.3	2
16	Regional heat flow and subsurface temperature patterns at Elysium Planitia and Oxia Planum areas, Mars. <i>Icarus</i> , 2021, 353, 113379.	2.5	7
17	Transient HCl in the atmosphere of Mars. <i>Science Advances</i> , 2021, 7, .	10.3	37
18	Water heavily fractionated as it ascends on Mars as revealed by ExoMars/NOMAD. <i>Science Advances</i> , 2021, 7, .	10.3	31

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19	The formation of araneiforms by carbon dioxide venting and vigorous sublimation dynamics under martian atmospheric pressure. <i>Scientific Reports</i> , 2021, 11, 6445.	3.3	8
20	Upper limits for phosphine (PH ₃) in the atmosphere of Mars. <i>Astronomy and Astrophysics</i> , 2021, 649, L1.	5.1	4
21	First Observation of the Oxygen 630Ånm Emission in the Martian Dayglow. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL092334.	4.0	8
22	Probing the Atmospheric Cl Isotopic Ratio on Mars: Implications for Planetary Evolution and Atmospheric Chemistry. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092650.	4.0	7
23	Asymmetric Impacts on Mars's Polar Vortices From an Equinoctial Global Dust Storm. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006774.	3.6	16
24	Annual Appearance of Hydrogen Chloride on Mars and a Striking Similarity With the Water Vapor Vertical Distribution Observed by TGO/NOMAD. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092506.	4.0	15
25	The climatology of carbon monoxide on Mars as observed by NOMAD nadir-geometry observations. <i>Icarus</i> , 2021, 362, 114404.	2.5	11
26	Martian water loss to space enhanced by regional dust storms. <i>Nature Astronomy</i> , 2021, 5, 1036-1042.	10.1	40
27	Enhanced Superrotation Before and During the 2018 Martian Global Dust Storm. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094634.	4.0	8
28	Enhanced water loss from the martian atmosphere during a regional-scale dust storm and implications for long-term water loss. <i>Earth and Planetary Science Letters</i> , 2021, 571, 117109.	4.4	22
29	ExoMars TGO/NOMAD's UVIS Vertical Profiles of Ozone: 2. The High-Altitude Layers of Atmospheric Ozone. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006834.	3.6	14
30	A Global and Seasonal Perspective of Martian Water Vapor From ExoMars/NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, .	3.6	8
31	ExoMars TGO/NOMAD's UVIS Vertical Profiles of Ozone: 1. Seasonal Variation and Comparison to Water. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006837.	3.6	18
32	First Detection and Thermal Characterization of Terminator CO ₂ Ice Clouds With ExoMars/NOMAD. <i>Geophysical Research Letters</i> , 2021, 48, .	4.0	12
33	Calibration of NOMAD on ESA's ExoMars Trace Gas Orbiter: Part 2 – The Limb, Nadir and Occultation (LNO) channel. <i>Planetary and Space Science</i> , 2021, , 105410.	1.7	3
34	Surface Warming During the 2018/Mars Year 34 Global Dust Storm. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL083936.	4.0	25
35	Explanation for the Increase in High-Altitude Water on Mars Observed by NOMAD During the 2018 Global Dust Storm. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL084354.	4.0	62
36	Strong Variability of Martian Water Ice Clouds During Dust Storms Revealed From ExoMars Trace Gas Orbiter/NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006250.	3.6	39

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37	Experimental evidence for lava-like mud flows under Martian surface conditions. <i>Nature Geoscience</i> , 2020, 13, 403-407.	12.9	29
38	OpenMARS: A global record of martian weather from 1999 to 2015. <i>Planetary and Space Science</i> , 2020, 188, 104962.	1.7	37
39	Detection of green line emission in the dayside atmosphere of Mars from NOMAD-TGO observations. <i>Nature Astronomy</i> , 2020, 4, 1049-1052.	10.1	13
40	Mud flow levitation on Mars: Insights from laboratory simulations. <i>Earth and Planetary Science Letters</i> , 2020, 545, 116406.	4.4	6
41	The UV surface habitability of Proxima <i>b</i> : first experiments revealing probable life survival to stellar flares. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2020, 494, L69-L74.	3.3	14
42	The transfer of unsterilized material from Mars to Phobos: Laboratory tests, modelling and statistical evaluation. <i>Life Sciences in Space Research</i> , 2019, 23, 112-134.	2.3	4
43	Aeolian abrasion of rocks as a mechanism to produce methane in the Martian atmosphere. <i>Scientific Reports</i> , 2019, 9, 8229.	3.3	1
44	Global analysis and forecasts of carbon monoxide on Mars. <i>Icarus</i> , 2019, 328, 232-245.	2.5	19
45	No detection of methane on Mars from early ExoMars Trace Gas Orbiter observations. <i>Nature</i> , 2019, 568, 517-520.	27.8	111
46	Martian dust storm impact on atmospheric H ₂ O and D/H observed by ExoMars Trace Gas Orbiter. <i>Nature</i> , 2019, 568, 521-525.	27.8	107
47	Water Vapor Vertical Profiles on Mars in Dust Storms Observed by TGO/NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 3482-3497.	3.6	88
48	Methane on Mars: New insights into the sensitivity of CH ₄ with the NOMAD/ExoMars spectrometer through its first in-flight calibration. <i>Icarus</i> , 2019, 321, 671-690.	2.5	32
49	ExoMars Atmospheric Mars Entry and Landing Investigations and Analysis (AMELIA). <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	14
50	Downslope sediment transport by boiling liquid water under Mars-like conditions: experiments and potential implications for Martian gullies. <i>Geological Society Special Publication</i> , 2019, 467, 373-410.	1.3	16
51	CO ₂ sublimation in Martian gullies: laboratory experiments at varied slope angle and regolith grain sizes. <i>Geological Society Special Publication</i> , 2019, 467, 343-371.	1.3	12
52	The Atmospheric Chemistry Suite (ACS) of Three Spectrometers for the ExoMars 2016 Trace Gas Orbiter. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	119
53	A reanalysis of ozone on Mars from assimilation of SPICAM observations. <i>Icarus</i> , 2018, 302, 308-318.	2.5	20
54	Investigations of the Mars Upper Atmosphere with ExoMars Trace Gas Orbiter. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	13

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55	NOMAD, an Integrated Suite of Three Spectrometers for the ExoMars Trace Gas Mission: Technical Description, Science Objectives and Expected Performance. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	95
56	Towards astrobiological experimental approaches to study planetary UV surface environments. <i>Proceedings of the International Astronomical Union</i> , 2018, 14, 222-226.	0.0	0
57	The distribution of putative periglacial landforms on the martian northern plains. <i>Icarus</i> , 2018, 314, 133-148.	2.5	4
58	Water induced sediment levitation enhances downslope transport on Mars. <i>Nature Communications</i> , 2017, 8, 1151.	12.8	33
59	Clastic patterned ground in Lomonosov crater, Mars: examining fracture controlled formation mechanisms. <i>Icarus</i> , 2017, 295, 125-139.	2.5	12
60	Modelled isotopic fractionation and transient diffusive release of methane from potential subsurface sources on Mars. <i>Icarus</i> , 2017, 281, 240-247.	2.5	12
61	On the link between martian total ozone and potential vorticity. <i>Icarus</i> , 2017, 282, 104-117.	2.5	11
62	The vertical transport of methane from different potential emission types on Mars. <i>Geophysical Research Letters</i> , 2017, 44, 8611-8620.	4.0	8
63	NOMAD spectrometer on the ExoMars trace gas orbiter mission: part 2 – design, manufacturing, and testing of the ultraviolet and visible channel. <i>Applied Optics</i> , 2017, 56, 2771.	2.1	40
64	History and Applications of Dust Devil Studies. <i>Space Sciences Series of ISSI</i> , 2017, , 5-37.	0.0	1
65	Field Measurements of Terrestrial and Martian Dust Devils. <i>Space Sciences Series of ISSI</i> , 2017, , 39-87.	0.0	1
66	Mass wasting triggered by seasonal CO ₂ sublimation under Martian atmospheric conditions: Laboratory experiments. <i>Geophysical Research Letters</i> , 2016, 43, 12,363.	4.0	27
67	History and Applications of Dust Devil Studies. <i>Space Science Reviews</i> , 2016, 203, 5-37.	8.1	43
68	Transport processes induced by metastable boiling water under Martian surface conditions. <i>Nature Geoscience</i> , 2016, 9, 425-428.	12.9	65
69	Optical and radiometric models of the NOMAD instrument part II: the infrared channels - SO and LNO. <i>Optics Express</i> , 2016, 24, 3790.	3.4	25
70	Dust Devil Sediment Transport: From Lab to Field to Global Impact. <i>Space Science Reviews</i> , 2016, 203, 377-426.	8.1	35
71	Field Measurements of Terrestrial and Martian Dust Devils. <i>Space Science Reviews</i> , 2016, 203, 39-87.	8.1	39
72	Defining Multiple Characteristic Raman Bands of α -Amino Acids as Biomarkers for Planetary Missions Using a Statistical Method. <i>Origins of Life and Evolution of Biospheres</i> , 2016, 46, 323-346.	1.9	14

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73	Expected performances of the NOMAD/ExoMars instrument. Planetary and Space Science, 2016, 124, 94-104.	1.7	31
74	The Interlayer Regions of Sheet Silicates as a Favorable Habitat for Endolithic Microorganisms. Geomicrobiology Journal, 2015, 32, 530-537.	2.0	3
75	Optical and radiometric models of the NOMAD instrument part I: the UVIS channel. Optics Express, 2015, 23, 30028.	3.4	26
76	Laboratory simulation of debris flows over sand dunes: Insights into gully-formation (Mars). Geomorphology, 2015, 231, 101-115.	2.6	21
77	Numerical modelling of the transport of trace gases including methane in the subsurface of Mars. Icarus, 2015, 250, 587-594.	2.5	16
78	NOMAD spectrometer on the ExoMars trace gas orbiter mission: part 1 "design, manufacturing and testing of the infrared channels. Applied Optics, 2015, 54, 8494.	2.1	58
79	Analysing the consistency of martian methane observations by investigation of global methane transport. Icarus, 2015, 257, 23-32.	2.5	13
80	Science objectives and performances of NOMAD, a spectrometer suite for the ExoMars TGO mission. Planetary and Space Science, 2015, 119, 233-249.	1.7	77
81	The radiative impact of water ice clouds from a reanalysis of Mars Climate Sounder data. Geophysical Research Letters, 2014, 41, 4471-4478.	4.0	36
82	Degradation of microbial fluorescence biosignatures by solar ultraviolet radiation on Mars. International Journal of Astrobiology, 2014, 13, 112-123.	1.6	24
83	The retrieval of optical properties from terrestrial dust devil vortices. Icarus, 2014, 231, 385-393.	2.5	16
84	The seasonal cycle of water vapour on Mars from assimilation of Thermal Emission Spectrometer data. Icarus, 2014, 237, 97-115.	2.5	47
85	Polarimetry as a tool to find and characterise habitable planets orbiting white dwarfs. Proceedings of the International Astronomical Union, 2014, 10, 325-332.	0.0	2
86	Radiative transfer modelling of dust devils. Icarus, 2013, 223, 1-10.	2.5	17
87	Experimental determination of photostability and fluorescence-based detection of PAHs on the Martian surface. Meteoritics and Planetary Science, 2012, 47, 806-819.	1.6	28
88	In situ measurements of particle load and transport in dust devils. Icarus, 2011, 214, 766-772.	2.5	43