Thierry Fouchet

List of Publications by Year
in descending order

113 papers	8,907 citations	53794 45 h-index	40979 93 g-index
116 all docs	116 docs citations	116 times ranked	4421 citing authors

#	Article	IF	Citations
1	In Situ exploration of the giant planets. Experimental Astronomy, 2022, 54, 975-1013.	3.7	5
2	Plutoâ€™s atmosphere observations with ALMA: Spatially-resolved maps of CO and HCN emission and first detection of HNC. Icarus, 2022, 372, 114722.	2.5	9
3	The SuperCam infrared spectrometer for the perseverance rover of the Mars2020 mission. Icarus, 2022, 373, 114773.	2.5	19
4	Thermal Structure and Aerosols in Marsâ€™ Atmosphere From TIRVIM/ACS Onboard the ExoMars Trace Gas Orbiter: Validation of the Retrieval Algorithm. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	9
5	SuperCam calibration targets on board the perseverance rover: Fabrication and quantitative characterization. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, 188, 106341.	2.9	20
6	Post-landing major element quantification using SuperCam laser induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, 188, 106347.	2.9	40
7	In situ recording of Mars soundscape. Nature, 2022, 605, 653-658.	27.8	30
8	The dynamic atmospheric and aeolian environment of Jezero crater, Mars. Science Advances, 2022, 8, .	10.3	47
9	First direct measurement of auroral and equatorial jets in the stratosphere of Jupiter. Astronomy and Astrophysics, 2021, 647, L8.	5.1	16
10	The SuperCam Instrument Suite on the Mars 2020 Rover: Science Objectives and Mast-Unit Description. Space Science Reviews, 2021, 217, 1.	8.1	131
11	The SuperCam Instrument Suite on the NASA Mars 2020 Rover: Body Unit and Combined System Tests. Space Science Reviews, 2021, 217, 4.	8.1	160
12	Global climate modeling of Saturn's atmosphere. Part II: Multi-annual high-resolution dynamical simulations. Icarus, 2020, 335, 113377.	2.5	31
13	Pre-launch radiometric calibration of the infrared spectrometer onboard SuperCam for the Mars2020 rover. Review of Scientific Instruments, 2020, 91, 063105.	1.3	10
14	Radiative-equilibrium model of Jupiterâ€™s atmosphere and application to estimating stratospheric circulations. Icarus, 2020, 351, 113935.	2.5	11
15	HDO and SO₂thermal mapping on Venus. Astronomy and Astrophysics, 2020, 639, A69.	5.1	19
16	Monitoring of the evolution of H₂O vapor in the stratosphere of Jupiter over an 18-yr period with the Odin space telescope. Astronomy and Astrophysics, 2020, 641, A140.	5.1	5
17	A stringent upper limit of the PH₃abundance at the cloud top of Venus. Astronomy and Astrophysics, 2020, 643, L5.	5.1	49
18	Spatial Variations in the Altitude of the CH₄ Homopause at Jupiterâ€™s Mid-to-high Latitudes, as Constrained from IRTF-TEXES Spectra. Planetary Science Journal, 2020, 1, 85.	3.6	9

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19	HDO and SO₂ thermal mapping on Venus. Astronomy and Astrophysics, 2019, 623, A70.	5.1	26
20	No detection of methane on Mars from early ExoMars Trace Gas Orbiter observations. Nature, 2019, 568, 517-520.	27.8	111
21	Martian dust storm impact on atmospheric H2O and D/H observed by ExoMars Trace Gas Orbiter. Nature, 2019, 568, 521-525.	27.8	107
22	Herschel map of Saturnâ€™s stratospheric water, delivered by the plumes of Enceladus. Astronomy and Astrophysics, 2019, 630, A87.	5.1	15
23	Ground-based infrared mapping of H₂O₂ on Mars near opposition. Astronomy and Astrophysics, 2019, 627, A60.	5.1	8
24	The SuperCam infrared instrument on the NASA MARS2020 mission: performance and qualification results. , 2019, , .		5
25	Equatorial Oscillation and Planetary Wave Activity in Saturn's Stratosphere Through the Cassini Epoch. Journal of Geophysical Research E: Planets, 2018, 123, 246-261.	3.6	19
26	The Atmospheric Chemistry Suite (ACS) of Three Spectrometers for the ExoMars 2016 Trace Gas Orbiter. Space Science Reviews, 2018, 214, 1.	8.1	119
27	Scientific rationale for Uranus and Neptune in situ explorations. Planetary and Space Science, 2018, 155, 12-40.	1.7	69
28	New measurements of D/H on Mars using EXES aboard SOFIA. Astronomy and Astrophysics, 2018, 612, A112.	5.1	26
29	Stringent upper limit of CH₄ on Mars based on SOFIA/EXES observations. Astronomy and Astrophysics, 2018, 610, A78.	5.1	10
30	Mapping of Jupiterâ€™s tropospheric NH 3 abundance using ground-based IRTF/TEXES observations at 5â€¯Âµm. Icarus, 2018, 314, 106-120.	2.5	8
31	Detection of CO and HCN in Plutoâ€™s atmosphere with ALMA. Icarus, 2017, 286, 289-307.	2.5	89
32	Disruption of Saturnâ€™s quasi-periodic equatorial oscillation by the great northern storm. Nature Astronomy, 2017, 1, 765-770.	10.1	37
33	Radiative Process: Techniques and Applications. , 2017, , 106-171.		21
34	The supercam infrared instrument on the NASA Mars2020 mission: optical design and performance. , 2017, , .		3
35	Analysis of high altitude clouds in the martian atmosphere based on Mars Climate Sounder observations. Journal of Physics: Conference Series, 2016, 771, 012049.	0.4	3
36	Unique Spectroscopy and Imaging of Mars with the James Webb Space Telescope. Publications of the Astronomical Society of the Pacific, 2016, 128, 018004.	3.1	5

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37	Stratospheric aftermath of the 2010 Storm on Saturn as observed by the TEXES instrument. I. Temperature structure. Icarus, 2016, 277, 196-214.	2.5	12
38	HDO and SO₂thermal mapping on Venus. Astronomy and Astrophysics, 2016, 595, A74.	5.1	24
39	A map of D/H on Mars in the thermal infrared using EXES aboard SOFIA. Astronomy and Astrophysics, 2016, 586, A62.	5.1	39
40	Submillimeter mapping of mesospheric minor species on Venus with ALMA. Planetary and Space Science, 2015, 113-114, 275-291.	1.7	45
41	Seasonal variations of hydrogen peroxide and water vapor on Mars: Further indications of heterogeneous chemistry. Astronomy and Astrophysics, 2015, 578, A127.	5.1	53
42	Seasonal changes in Saturnâ€™s stratosphere inferred from Cassini/CIRS limb observations. Icarus, 2015, 258, 224-238.	2.5	22
43	Stratospheric benzene and hydrocarbon aerosols detected in Saturnâ€™s auroral regions. Astronomy and Astrophysics, 2015, 580, A89.	5.1	19
44	Scientific rationale for Saturn×³s in situ exploration. Planetary and Space Science, 2014, 104, 29-47.	1.7	49
45	Global climate modeling of Saturnâ€™s atmosphere. Part I: Evaluation of the radiative transfer model. Icarus, 2014, 238, 110-124.	2.5	45
46	HDO and SO₂thermal mapping on Venus. Astronomy and Astrophysics, 2013, 559, A65.	5.1	26
47	HDO and SO₂thermal mapping on Venus: evidence for strong SO₂Âvariability. Astronomy and Astrophysics, 2012, 543, A153.	5.1	40
48	Evolution of the equatorial oscillation in Saturn's stratosphere between 2005 and 2010 from Cassini/CIRS limb data analysis. Geophysical Research Letters, 2011, 38, .	4.0	41
49	A stringent upper limit to SO₂in the Martian atmosphere. Astronomy and Astrophysics, 2011, 530, A37.	5.1	49
50	Interferometric millimeter observations of water vapor on Mars and comparison with Mars Express measurements. Planetary and Space Science, 2011, 59, 683-690.	1.7	7
51	Meridional distribution of CH3C2H and C4H2 in Saturnâ€™s stratosphere from CIRS/Cassini limb and nadir observations. Icarus, 2010, 209, 682-695.	2.5	35
52	Water vapor map of Mars near summer solstice using ground-based infrared spectroscopy. Astronomy and Astrophysics, 2010, 520, A33.	5.1	10
53	A cometary origin for CO in the stratosphere of Saturn?. Astronomy and Astrophysics, 2010, 510, A88.	5.1	37
54	First observation of CO at 345GHz in the atmosphere of Saturn with the JCMT: New constraints on its origin. Icarus, 2009, 203, 531-540.	2.5	33

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55	Kronos: exploring the depths of Saturn with probes and remote sensing through an international mission. Experimental Astronomy, 2009, 23, 947-976.	3.7	10
56	Mars environment and magnetic orbiter model payload. Experimental Astronomy, 2009, 23, 761-783.	3.7	7
57	OMEGA/Mars Express: South Pole Region, water vapor daily variability. Icarus, 2009, 201, 102-112.	2.5	17
58	A study of the properties of a local dust storm with Mars Express OMEGA and PFS data. Icarus, 2009, 201, 504-516.	2.5	42
59	Vertical and meridional distribution of ethane, acetylene and propane in Saturnâ€™s stratosphere from CIRS/Cassini limb observations. Icarus, 2009, 203, 214-232.	2.5	78
60	Observations of CO in the atmosphere of Mars with PFS onboard Mars Express. Planetary and Space Science, 2009, 57, 1446-1457.	1.7	45
61	Mars Environment and Magnetic Orbiter Scientific and Measurement Objectives. Astrobiology, 2009, 9, 71-89.	3.0	4
62	Saturn: Composition and Chemistry. , 2009, , 83-112.		23
63	Investigation of water vapor on Mars with PFS/SW of Mars Express. Icarus, 2008, 195, 557-575.	2.5	48
64	Simultaneous mapping of H2O and H2O2 on Mars from infrared high-resolution imaging spectroscopy. Icarus, 2008, 195, 547-556.	2.5	42
65	An equatorial oscillation in Saturnâ€™s middle atmosphere. Nature, 2008, 453, 200-202.	27.8	88
66	A study of the Martian water vapor over Hellas using OMEGA and PFS aboard Mars Express. Astronomy and Astrophysics, 2008, 484, 547-553.	5.1	8
67	Observations of CO on Saturn and Uranus at millimeter wavelengths: new upper limit determinations. Astronomy and Astrophysics, 2008, 484, 555-561.	5.1	17
68	Hyperspectral imaging of convective CO₂ ice clouds in the equatorial mesosphere of Mars. Journal of Geophysical Research, 2007, 112, .	3.3	81
69	Vertical abundance profiles of hydrocarbons in Titan's atmosphere at 15Â° S and 80Â° N retrieved from Cassini/CIRS spectra. Icarus, 2007, 188, 120-138.	2.5	176
70	Meridional variations of C2H2 and C2H6 in Jupiter's atmosphere from Cassini CIRS infrared spectra. Icarus, 2007, 188, 47-71.	2.5	72
71	The composition of Titan's stratosphere from Cassini/CIRS mid-infrared spectra. Icarus, 2007, 189, 35-62.	2.5	367
72	Martian water vapor: Mars Express PFS/LW observations. Icarus, 2007, 190, 32-49.	2.5	101

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73	Water vapor mapping on Mars using OMEGA/Mars Express. Planetary and Space Science, 2007, 55, 333-342.	1.7	50
74	Scientific goals for the observation of Venus by VIRTIS on ESA/Venus express mission. Planetary and Space Science, 2007, 55, 1653-1672.	1.7	155
75	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. Nature, 2007, 450, 641-645.	27.8	95
76	South-polar features on Venus similar to those near the north pole. Nature, 2007, 450, 637-640.	27.8	110
77	La mÃ©tÃ©orologie de Jupiter. La MÃ©tÃ©orologie, 2006, 8, 19.	0.5	0
78	New upper limits for hydrogen halides on Saturn derived from Cassini-CIRS data. Icarus, 2006, 185, 466-475.	2.5	15
79	Model, software and database for line-mixing effects in the Î½3 and Î½4 bands of CH4 and tests using laboratory and planetary measurementsâ€”II: H2 (and He) broadening and the atmospheres of Jupiter and Saturn. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 101, 306-324.	2.3	42
80	A simulation of the OMEGA/Mars Express observations: Analysis of the atmospheric contribution. Planetary and Space Science, 2006, 54, 774-783.	1.7	8
81	Global Mineralogical and Aqueous Mars History Derived from OMEGA/Mars Express Data. Science, 2006, 312, 400-404.	12.6	1,395
82	Mapping potential-vorticity dynamics on Jupiter. I: Zonal-mean circulation from Cassini and Voyager 1 data. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 1577-1603.	2.7	63
83	Latitudinal variation of Saturn photochemistry deduced from spatially-resolved ultraviolet spectra. Icarus, 2006, 180, 379-392.	2.5	40
84	Seasonal variations of the martian COÂover Hellas as observed byÂOMEGA/Mars Express. Astronomy and Astrophysics, 2006, 459, 265-270.	5.1	62
85	New Results on the Composition of the Outer Planets and Titan. Highlights of Astronomy, 2005, 13, 891-893.	0.0	0
86	Phyllosilicates on Mars and implications for early martian climate. Nature, 2005, 438, 623-627.	27.8	825
87	The Planets and Titan Observed by ISO. Space Science Reviews, 2005, 119, 123-139.	8.1	13
88	Modeling the annual cycle of HDO in the Martian atmosphere. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	100
89	Mars Surface Diversity as Revealed by the OMEGA/Mars Express Observations. Science, 2005, 307, 1576-1581.	12.6	842
90	Temperatures, Winds, and Composition in the Saturnian System. Science, 2005, 307, 1247-1251.	12.6	184

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91	Titan's Atmospheric Temperatures, Winds, and Composition. Science, 2005, 308, 975-978.	12.6	318
92	Photochemistry and diffusion in Jupiter's stratosphere: Constraints from ISO observations and comparisons with other giant planets. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	167
93	A mapping of martian water sublimation during early northern summer using OMEGA/Mars Express. Astronomy and Astrophysics, 2005, 441, L9-L12.	5.1	26
94	The Planets and Titan Observed by ISO. , 2005, , 123-139.		3
95	Jupiter's Atmospheric Composition from the Cassini Thermal Infrared Spectroscopy Experiment. Science, 2004, 305, 1582-1586.	12.6	63
96	Exploring the Saturn System in the Thermal Infrared: The Composite Infrared Spectrometer. , 2004, , 169-297.		5
97	An intense stratospheric jet on Jupiter. Nature, 2004, 427, 132-135.	27.8	103
98	Upper limits on hydrogen halides in Jupiter from Cassini/CIRS observations. Icarus, 2004, 170, 237-241.	2.5	13
99	Exploring The Saturn System In The Thermal Infrared: The Composite Infrared Spectrometer. Space Science Reviews, 2004, 115, 169-297.	8.1	275
100	Retrievals of jovian tropospheric phosphine from Cassini/CIRS. Icarus, 2004, 172, 37-49.	2.5	68
101	Search for spatial variation in the jovian 15N/14N ratio from Cassini/CIRS observations. Icarus, 2004, 172, 50-58.	2.5	64
102	Spectro-imaging observations of Jupiter's 2-Î¼m auroral emission. I.ÂH3+Âdistribution and temperature. Icarus, 2004, 171, 133-152.	2.5	45
103	The hydrogen ortho-to-para ratio in the stratospheres of the giant planets. Icarus, 2003, 161, 127-143.	2.5	45
104	Titan's 5-Î¼m window: observations with the Very Large Telescope. Icarus, 2003, 162, 125-142.	2.5	51
105	A far wing lineshape for H2 broadened CH4 infrared transitions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 72, 117-122.	2.3	42
106	Detection of S (IV) 10.51 Î¼m emission from the Io plasma torus. Journal of Geophysical Research, 2001, 106, 29899-29910.	3.3	18
107	The deuterium abundance in Jupiter and Saturn from ISO-SWS observations. Astronomy and Astrophysics, 2001, 370, 610-622.	5.1	204
108	ISO-SWS Observations of Jupiter: Measurement of the Ammonia Tropospheric Profile and of the 15N/14N Isotopic Ratio. Icarus, 2000, 143, 223-243.	2.5	111

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109	Vapor Pressure Isotope Fractionation Effects in Planetary Atmospheres: Application to Deuterium. Icarus, 2000, 144, 114-123.	2.5	44
110	Line Positions and Intensities in the 2Î½2/Î½4 Vibrational System of 14NH3 near 5â€“7 Î¼m. Journal of Molecular Spectroscopy, 2000, 203, 285-309.	1.2	66
111	The atmospheric composition and structure of Jupiter and Saturn from ISO observations: a preliminary review. Planetary and Space Science, 1999, 47, 1225-1242.	1.7	50
112	Mapping the thermal structure and minor species of Venus mesosphere with ALMA submillimeter observations. Astronomy and Astrophysics, 0, , .	5.1	6
113	The CH4 abundance in Jupiter's upper atmosphere. Astronomy and Astrophysics, 0, , .	5.1	2