Jean-Pierre Bibring

List of Publications by Year
in descending order

100	12,171	36303	40979
papers	citations	51 h-index	93 g-index

101	101	101	4642
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Sulfates in Martian Layered Terrains: The OMEGA/Mars Express View. Science, 2005, 307, 1587-1591.	12.6	867
2	Mars Surface Diversity as Revealed by the OMEGA/Mars Express Observations. Science, 2005, 307, 1576-1581.	12.6	842
3	Phyllosilicates on Mars and implications for early martian climate. Nature, 2005, 438, 623-627.	27.8	825
4	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) on Mars Reconnaissance Orbiter (MRO). Journal of Geophysical Research, 2007, 112, .	3.3	796
5	Hydrated silicate minerals on Mars observed by the Mars Reconnaissance Orbiter CRISM instrument. Nature, 2008, 454, 305-309.	27.8	630
6	Sulfates in the North Polar Region of Mars Detected by OMEGA/Mars Express. Science, 2005, 307, 1584-1586.	12.6	450
7	A synthesis of Martian aqueous mineralogy after 1 Mars year of observations from the Mars Reconnaissance Orbiter. Journal of Geophysical Research, 2009, 114, .	3.3	445
8	Hayabusa2 arrives at the carbonaceous asteroid 162173 Ryuguâ€”A spinning topâ€“shaped rubble pile. Science, 2019, 364, 268-272.	12.6	410
9	Olivine and Pyroxene Diversity in the Crust of Mars. Science, 2005, 307, 1594-1597.	12.6	348
10	Phyllosilicate Diversity and Past Aqueous Activity Revealed at Mawrth Vallis, Mars. Science, 2008, 321, 830-833.	12.6	328
11	CRISM multispectral summary products: Parameterizing mineral diversity on Mars from reflectance. Journal of Geophysical Research, 2007, 112, .	3.3	304
12	Perennial water ice identified in the south polar cap of Mars. Nature, 2004, 428, 627-630.	27.8	279
13	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. Science, 2019, 364, 272-275.	12.6	262
14	Martian surface mineralogy from Observatoire pour la MinÃ©ralogie, l'Eau, les Glaces et l'ActivitÃ© on board the Mars Express spacecraft (OMEGA/MEx): Global mineral maps. Journal of Geophysical Research, 2007, 112, .	3.3	191
15	Compact Reconnaissance Imaging Spectrometer for Mars investigation and data set from the Mars Reconnaissance Orbiter's primary science phase. Journal of Geophysical Research, 2009, 114, .	3.3	178
16	Early geochemical environment of Mars as determined from thermodynamics of phyllosilicates. Nature, 2007, 448, 60-63.	27.8	168
17	Spectral Reflectance and Morphologic Correlations in Eastern Terra Meridiani, Mars. Science, 2005, 307, 1591-1594.	12.6	160
18	Evidence for the origin of layered deposits in Candor Chasma, Mars, from mineral composition and hydrologic modeling. Journal of Geophysical Research, 2009, 114, .	3.3	159

#	Article	IF	Citations
19	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
20	Mineralogy of the Nili Fossae region with OMEGA/Mars Express data: 2. Aqueous alteration of the crust. Journal of Geophysical Research, 2007, 112, .	3.3	154
21	Phyllosilicates in the Mawrth Vallis region of Mars. Journal of Geophysical Research, 2007, 112, .	3.3	153
22	Composition, Morphology, and Stratigraphy of Noachian Crust around the Isidis basin. Journal of Geophysical Research, 2009, 114, .	3.3	144
23	Summer Evolution of the North Polar Cap of Mars as Observed by OMEGA/Mars Express. Science, 2005, 307, 1581-1584.	12.6	142
24	Preliminary analysis of the Hayabusa2 samples returned from C-type asteroid Ryugu. Nature Astronomy, 2022, 6, 214-220.	10.1	136
25	Detection of Hydrated Silicates in Crustal Outcrops in the Northern Plains of Mars. Science, 2010, 328, 1682-1686.	12.6	134
26	Global maps of anhydrous minerals at the surface of Mars from OMEGA/MEx. Journal of Geophysical Research, 2012, 117, .	3.3	133
27	Stratigraphy, mineralogy, and origin of layered deposits inside Terby crater, Mars. Icarus, 2011, 211, 273-304.	2.5	131
28	Mineralogy of the Nili Fossae region with OMEGA/Mars Express data: 1. Ancient impact melt in the Isidis Basin and implications for the transition from the Noachian to Hesperian. Journal of Geophysical Research, 2007, 112, .	3.3	130
29	Observations of the south seasonal cap of Mars during recession in 2004â€“2006 by the OMEGA visible/nearâ€infrared imaging spectrometer on board Mars Express. Journal of Geophysical Research, 2007, 112, .	3.3	128
30	Characterization of phyllosilicates observed in the central Mawrth Vallis region, Mars, their potential formational processes, and implications for past climate. Journal of Geophysical Research, 2009, 114, .	3.3	117
31	Global investigation of olivine on Mars: Insights into crust and mantle compositions. Journal of Geophysical Research E: Planets, 2013, 118, 234-262.	3.6	117
32	Quantitative compositional analysis of martian mafic regions using the MEx/OMEGA reflectance data. Icarus, 2009, 201, 84-101.	2.5	109
33	On the origin of gypsum in the Mars north polar region. Journal of Geophysical Research, 2007, 112, .	3.3	103
34	MASCOTâ€”The Mobile Asteroid Surface Scout Onboard the Hayabusa2 Mission. Space Science Reviews, 2017, 208, 339-374.	8.1	100
35	Images from the surface of asteroid Ryugu show rocks similar to carbonaceous chondrite meteorites. Science, 2019, 365, 817-820.	12.6	99
36	Hydration state of the Martian surface as seen by Mars Express OMEGA: 2. H₂O content of the surface. Journal of Geophysical Research, 2007, 112, .	3.3	98

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37	Analysis of OMEGA/Mars Express data hyperspectral data using a Multiple-Endmember Linear Spectral Unmixing Model (MELSUM): Methodology and first results. Planetary and Space Science, 2008, 56, 951-975.	1.7	88
38	The structure of the regolith on 67P/Churyumov-Gerasimenko from ROLIS descent imaging. Science, 2015, 349, aab0232.	12.6	86
39	Mineralogy of Terra Meridiani and western Arabia Terra from OMEGA/MEx and implications for their formation. Icarus, 2008, 195, 106-130.	2.5	85
40	The MicrOmega Investigation Onboard ExoMars. Astrobiology, 2017, 17, 621-626.	3.0	85
41	Hydration state of the Martian surface as seen by Mars Express OMEGA: 1. Analysis of the 3 Î¼m hydration feature. Journal of Geophysical Research, 2007, 112, .	3.3	83
42	Hyperspectral imaging of convective CO₂ ice clouds in the equatorial mesosphere of Mars. Journal of Geophysical Research, 2007, 112, .	3.3	81
43	Nearâ€tropical subsurface ice on Mars. Geophysical Research Letters, 2010, 37, .	4.0	79
44	Winter and spring evolution of northern seasonal deposits on Mars from OMEGA on Mars Express. Journal of Geophysical Research, 2011, 116, .	3.3	79
45	Testing evidence of recent hydration state change in sulfates on Mars. Journal of Geophysical Research, 2009, 114, .	3.3	78
46	Recovery of surface reflectance spectra and evaluation of the optical depth of aerosols in the nearâ€IR using a Monte Carlo approach: Application to the OMEGA observations of highâ€latitude regions of Mars. Journal of Geophysical Research, 2007, 112, .	3.3	68
47	New near-IR observations of mesospheric CO₂and H₂O clouds on Mars. Journal of Geophysical Research, 2011, 116, .	3.3	65
48	First compositional analysis of Ryugu samples by the MicrOmega hyperspectral microscope. Nature Astronomy, 2022, 6, 221-225.	10.1	65
49	Quantitative compositional analysis of martian mafic regions using the MEx/OMEGA reflectance data 1. Methodology, uncertainties and examples of application. Icarus, 2009, 201, 69-83.	2.5	63
50	South Pole of Mars: Nature and composition of the icy terrains from Mars Express OMEGA observations. Planetary and Space Science, 2007, 55, 113-133.	1.7	60
51	No signature of clear CO2 ice from the â€˜crypticâ€™ regions in Mars' south seasonal polar cap. Nature, 2006, 442, 790-792.	27.8	54
52	The Philae lander mission and science overview. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160248.	3.4	53
53	CIVA. Space Science Reviews, 2007, 128, 397-412.	8.1	47
54	67P/Churyumov-Gerasimenko surface properties as derived from CIVA panoramic images. Science, 2015, 349, aab0671.	12.6	47

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55	Thermally altered subsurface material of asteroid (162173) Ryugu. Nature Astronomy, 2021, 5, 246-250.	10.1	47
56	The Camera of the MASCOT Asteroid Lander on Board Hayabusa 2. Space Science Reviews, 2017, 208, 375-400.	8.1	46
57	NIR reflectance hyperspectral microscopy for planetary science: Application to the MicrOmega instrument. Planetary and Space Science, 2013, 76, 42-52.	1.7	45
58	The MicrOmega Investigation Onboard Hayabusa2. Space Science Reviews, 2017, 208, 401-412.	8.1	43
59	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
60	Annual survey of water vapor behavior from the OMEGA mapping spectrometer onboard Mars Express. Icarus, 2011, 213, 480-495.	2.5	42
61	On the origin of perennial water ice at the south pole of Mars: A precessionâ€controlled mechanism?. Journal of Geophysical Research, 2007, 112, .	3.3	40
62	Ferric oxides in East Candor Chasma, Valles Marineris (Mars) inferred from analysis of OMEGA/Mars Express data: Identification and geological interpretation. Journal of Geophysical Research, 2008, 113, .	3.3	40
63	Yearly and seasonal variations of low albedo surfaces on Mars in the OMEGA/MEx dataset: Constraints on aerosols properties and dust deposits. Icarus, 2009, 200, 395-405.	2.5	39
64	Mapping of water frost and ice at low latitudes on Mars. Icarus, 2009, 203, 406-420.	2.5	39
65	Water in the Martian regolith from OMEGA/Mars Express. Journal of Geophysical Research E: Planets, 2014, 119, 1969-1989.	3.6	39
66	Remote sensing of surface pressure on Mars with the Mars Express/OMEGA spectrometer: 1. Retrieval method. Journal of Geophysical Research, 2007, 112, .	3.3	38
67	Micromega/IR: Design and status of a near-infrared spectral microscope for in situ analysis of Mars samples. Planetary and Space Science, 2009, 57, 1068-1075.	1.7	37
68	Compositional investigation of the proposed chlorideâ€bearing materials on Mars using nearâ€infrared orbital data from OMEGA/MEx. Journal of Geophysical Research, 2012, 117, .	3.3	35
69	A systematic mapping procedure based on the Modified Gaussian Model to characterize magmatic units from olivine/pyroxenes mixtures: Application to the Syrtis Major volcanic shield on Mars. Journal of Geophysical Research E: Planets, 2013, 118, 1632-1655.	3.6	33
70	Remote sensing of surface pressure on Mars with the Mars Express/OMEGA spectrometer: 2. Meteorological maps. Journal of Geophysical Research, 2007, 112, .	3.3	31
71	Mineralogical structure of the subsurface of Syrtis Major from OMEGA observations of lobate ejecta blankets. Journal of Geophysical Research, 2007, 112, .	3.3	31
72	Science exploration and instrumentation of the OKEANOS mission to a Jupiter Trojan asteroid using the solar power sail. Planetary and Space Science, 2018, 161, 99-106.	1.7	31

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73	Coordinated analyses of orbital and Spirit Rover data to characterize surface materials on the cratered plains of Gusev Crater, Mars. Journal of Geophysical Research, 2007, 112, .	3.3	29
74	Mars surface thermal inertia and heterogeneities from OMEGA/MEX. Icarus, 2014, 233, 194-213.	2.5	23
75	The Martian Surface Composition. Space Science Reviews, 2001, 96, 293-316.	8.1	21
76	Candidates source regions of martian meteorites as identified by OMEGA/MEx. Icarus, 2015, 258, 366-383.	2.5	19
77	Raman Laser Spectrometer (RLS) calibration target design to allow onboard combined science between the RLS and MicrOmega instruments on the ExoMars rover. Journal of Raman Spectroscopy, 2020, 51, 1718-1730.	2.5	19
78	Dust haze in Valles Marineris observed by HRSC and OMEGA on board Mars Express. Journal of Geophysical Research, 2008, 113, .	3.3	18
79	The MASCOT lander aboard Hayabusa2: The in-situ exploration of NEA (162173) Ryugu. Planetary and Space Science, 2021, 200, 105200.	1.7	18
80	The M3 project: 2 - Global distributions of mafic mineral abundances on Mars. Icarus, 2019, 322, 31-53.	2.5	17
81	ESSC-ESF Position Paperâ€"Science-Driven Scenario for Space Exploration: Report from the European Space Sciences Committee (ESSC). Astrobiology, 2009, 9, 23-41.	3.0	13
82	OMEGA long wavelength channel: Data reduction during non-nominal stages. Planetary and Space Science, 2009, 57, 1032-1042.	1.7	11
83	Martian cloud climatology and life cycle extracted from Mars Express OMEGA spectral images. Icarus, 2021, 353, 114101.	2.5	10
84	The on-ground calibration performances of the hyperspectral microscope MicrOmega for the Hayabusa-2 mission. Planetary and Space Science, 2018, 152, 31-44.	1.7	9
85	The M3 project: 1- A global hyperspectral image-cube of the martian surface. Icarus, 2019, 319, 281-292.	2.5	8
86	Mineralogy of the Martian surface from Mars Express OMEGA observations. , 0, , 151-168.		7
87	Visible to Short-Wave Infrared Spectral Analyses of Mars from Orbit Using CRISM and OMEGA. , 2019, , 453-483.		6
88	The process for the selection of MASCOT landing site on Ryugu: Design, execution and results. Planetary and Space Science, 2020, 194, 105086.	1.7	6
89	A new method to investigate hyperspectral image cubes: An application of the wavelet transform. Journal of Geophysical Research, 2006, 111, .	3.3	5
90	Automated algorithms to identify and locate grains of specific composition for NIR hyperspectral microscopes: Application to the MicrOmega instrument onboard ExoMars. Planetary and Space Science, 2014, 99, 7-18.	1.7	5

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91	Planetary Terrestrial Analogues Library project: 2. building a laboratory facility for MicrOmega characterization. Planetary and Space Science, 2020, 193, 105087.	1.7	5
92	Calibration and performances of the MicrOmega instrument for the characterization of asteroid Ryugu returned samples. Review of Scientific Instruments, 2022, 93, .	1.3	5
93	An iterative least squares approach to decorrelate minerals and ices contributions in hyperspectral images: Application to Cuprite (earth) and Mars. , 2009, , .		4
94	Introduction to special section: OMEGA/Mars Express Mars Surface and Atmospheric Properties. Journal of Geophysical Research, 2007, 112, .	3.3	2
95	Rosetta Lander (â€œPhilaeâ€) Investigations. , 2009, , 1-171.		2
96	MicrOmega/MASCOT first results. Planetary and Space Science, 2022, 210, 105393.	1.7	2
97	The MicrOmega Investigation Onboard Hayabusa2. , 2017, , 401-412.		1
98	Water on Mars. , 0, , 234-244.		0
99	Planetary Terrestrial Analogues Library Project: 3. Characterization of Samples With MicrOmega. Astrobiology, 2022, , .	3.0	0
100	A new concept of acousto-optic tunable filter-based near-infrared hyperspectral imager for planetary surface exploration. Review of Scientific Instruments, 2022, 93, 044501.	1.3	0