

Jean-Pierre Bibring

List of Publications by Year in descending order

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papers

12,171
citations

36303

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93
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101
all docs

101
docs citations

101
times ranked

4642
citing authors

#	ARTICLE	IF	CITATIONS
1	MicrOmega/MASCOT first results. Planetary and Space Science, 2022, 210, 105393.	1.7	2
2	Planetary Terrestrial Analogues Library Project: 3. Characterization of Samples With MicrOmega. Astrobiology, 2022, , .	3.0	0
3	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
4	Preliminary analysis of the Hayabusa2 samples returned from C-type asteroid Ryugu. Nature Astronomy, 2022, 6, 214-220.	10.1	136
5	First compositional analysis of Ryugu samples by the MicrOmega hyperspectral microscope. Nature Astronomy, 2022, 6, 221-225.	10.1	65
6	Calibration and performances of the MicrOmega instrument for the characterization of asteroid Ryugu returned samples. Review of Scientific Instruments, 2022, 93, .	1.3	5
7	Martian cloud climatology and life cycle extracted from Mars Express OMEGA spectral images. Icarus, 2021, 353, 114101.	2.5	10
8	Thermally altered subsurface material of asteroid (162173) Ryugu. Nature Astronomy, 2021, 5, 246-250.	10.1	47
9	The MASCOT lander aboard Hayabusa2: The in-situ exploration of NEA (162173) Ryugu. Planetary and Space Science, 2021, 200, 105200.	1.7	18
10	Planetary Terrestrial Analogues Library project: 2. building a laboratory facility for MicrOmega characterization. Planetary and Space Science, 2020, 193, 105087.	1.7	5
11	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
12	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
13	Images from the surface of asteroid Ryugu show rocks similar to carbonaceous chondrite meteorites. Science, 2019, 365, 817-820.	12.6	99
14	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. Science, 2019, 364, 272-275.	12.6	262
15	Hayabusa2 arrives at the carbonaceous asteroid 162173 Ryugu—A spinning top—shaped rubble pile. Science, 2019, 364, 268-272.	12.6	410
16	Visible to Short-Wave Infrared Spectral Analyses of Mars from Orbit Using CRISM and OMEGA. , 2019, , 453-483.		6
17	The M3 project: 2 - Global distributions of mafic mineral abundances on Mars. Icarus, 2019, 322, 31-53.	2.5	17
18	The M3 project: 1- A global hyperspectral image-cube of the martian surface. Icarus, 2019, 319, 281-292.	2.5	8

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19	Science exploration and instrumentation of the OKEANOS mission to a Jupiter Trojan asteroid using the solar power sail. <i>Planetary and Space Science</i> , 2018, 161, 99-106.	1.7	31
20	The on-ground calibration performances of the hyperspectral microscope MicrOmega for the Hayabusa-2 mission. <i>Planetary and Space Science</i> , 2018, 152, 31-44.	1.7	9
21	MASCOT – The Mobile Asteroid Surface Scout Onboard the Hayabusa2 Mission. <i>Space Science Reviews</i> , 2017, 208, 339-374.	8.1	100
22	The Philae lander mission and science overview. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160248.	3.4	53
23	The MicrOmega Investigation Onboard ExoMars. <i>Astrobiology</i> , 2017, 17, 621-626.	3.0	85
24	The MicrOmega Investigation Onboard Hayabusa2. <i>Space Science Reviews</i> , 2017, 208, 401-412.	8.1	43
25	The Camera of the MASCOT Asteroid Lander on Board Hayabusa 2. <i>Space Science Reviews</i> , 2017, 208, 375-400.	8.1	46
26	The MicrOmega Investigation Onboard Hayabusa2. , 2017, , 401-412.		1
27	Candidates source regions of martian meteorites as identified by OMEGA/MEx. <i>Icarus</i> , 2015, 258, 366-383.	2.5	19
28	The structure of the regolith on 67P/Churyumov-Gerasimenko from ROLIS descent imaging. <i>Science</i> , 2015, 349, aab0232.	12.6	86
29	67P/Churyumov-Gerasimenko surface properties as derived from CIVA panoramic images. <i>Science</i> , 2015, 349, aab0671.	12.6	47
30	Mars surface thermal inertia and heterogeneities from OMEGA/MEX. <i>Icarus</i> , 2014, 233, 194-213.	2.5	23
31	Automated algorithms to identify and locate grains of specific composition for NIR hyperspectral microscopes: Application to the MicrOmega instrument onboard ExoMars. <i>Planetary and Space Science</i> , 2014, 99, 7-18.	1.7	5
32	Water in the Martian regolith from OMEGA/Mars Express. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1969-1989.	3.6	39
33	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. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1632-1655.	3.6	33
34	NIR reflectance hyperspectral microscopy for planetary science: Application to the MicrOmega instrument. <i>Planetary and Space Science</i> , 2013, 76, 42-52.	1.7	45
35	Global investigation of olivine on Mars: Insights into crust and mantle compositions. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 234-262.	3.6	117
36	Compositional investigation of the proposed chloride-bearing materials on Mars using near-infrared orbital data from OMEGA/MEX. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	35

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37	Global maps of anhydrous minerals at the surface of Mars from OMEGA/MEx. Journal of Geophysical Research, 2012, 117, .	3.3	133
38	Winter and spring evolution of northern seasonal deposits on Mars from OMEGA on Mars Express. Journal of Geophysical Research, 2011, 116, .	3.3	79
39	New near-IR observations of mesospheric CO ₂ and H ₂ O clouds on Mars. Journal of Geophysical Research, 2011, 116, .	3.3	65
40	Stratigraphy, mineralogy, and origin of layered deposits inside Terby crater, Mars. Icarus, 2011, 211, 273-304.	2.5	131
41	Annual survey of water vapor behavior from the OMEGA mapping spectrometer onboard Mars Express. Icarus, 2011, 213, 480-495.	2.5	42
42	Detection of Hydrated Silicates in Crustal Outcrops in the Northern Plains of Mars. Science, 2010, 328, 1682-1686.	12.6	134
43	Near-tropical subsurface ice on Mars. Geophysical Research Letters, 2010, 37, .	4.0	79
44	ESSC-ESF Position Paper "Science-Driven Scenario for Space Exploration: Report from the European Space Sciences Committee (ESSC). Astrobiology, 2009, 9, 23-41.	3.0	13
45	An iterative least squares approach to decorrelate minerals and ices contributions in hyperspectral images: Application to Cuprite (earth) and Mars. , 2009, , .		4
46	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
47	Quantitative compositional analysis of martian mafic regions using the MEx/OMEGA reflectance data. Icarus, 2009, 201, 84-101.	2.5	109
48	Mapping of water frost and ice at low latitudes on Mars. Icarus, 2009, 203, 406-420.	2.5	39
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	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
51	OMEGA long wavelength channel: Data reduction during non-nominal stages. Planetary and Space Science, 2009, 57, 1032-1042.	1.7	11
52	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
53	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
54	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

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55	Compact Reconnaissance Imaging Spectrometer for Mars investigation and data set from the Mars Reconnaissance Orbiter's primary science phase. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	178
56	Composition, Morphology, and Stratigraphy of Noachian Crust around the Isidis basin. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	144
57	Testing evidence of recent hydration state change in sulfates on Mars. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	78
58	Characterization of phyllosilicates observed in the central Mawrth Vallis region, Mars, their potential formational processes, and implications for past climate. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	117
59	Rosetta Lander (â€œPhilaeâ€) Investigations. , 2009, , 1-171.		2
60	Analysis of OMEGA/Mars Express data hyperspectral data using a Multiple-Endmember Linear Spectral Unmixing Model (MELSUM): Methodology and first results. <i>Planetary and Space Science</i> , 2008, 56, 951-975.	1.7	88
61	Mineralogy of Terra Meridiani and western Arabia Terra from OMEGA/MEx and implications for their formation. <i>Icarus</i> , 2008, 195, 106-130.	2.5	85
62	Hydrated silicate minerals on Mars observed by the Mars Reconnaissance Orbiter CRISM instrument. <i>Nature</i> , 2008, 454, 305-309.	27.8	630
63	Dust haze in Valles Marineris observed by HRSC and OMEGA on board Mars Express. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	18
64	Ferric oxides in East Candor Chasma, Valles Marineris (Mars) inferred from analysis of OMEGA/Mars Express data: Identification and geological interpretation. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	40
65	Phyllosilicate Diversity and Past Aqueous Activity Revealed at Mawrth Vallis, Mars. <i>Science</i> , 2008, 321, 830-833.	12.6	328
66	Hydration state of the Martian surface as seen by Mars Express OMEGA: 2. H ₂ O content of the surface. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	98
67	Phyllosilicates in the Mawrth Vallis region of Mars. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	153
68	Remote sensing of surface pressure on Mars with the Mars Express/OMEGA spectrometer: 2. Meteorological maps. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	31
69	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. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	128
70	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. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	130
71	Hydration state of the Martian surface as seen by Mars Express OMEGA: 1. Analysis of the 3 μ m hydration feature. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	83
72	Mineralogy of the Nili Fossae region with OMEGA/Mars Express data: 2. Aqueous alteration of the crust. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	154

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73	CRISM multispectral summary products: Parameterizing mineral diversity on Mars from reflectance. Journal of Geophysical Research, 2007, 112, .	3.3	304
74	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) on Mars Reconnaissance Orbiter (MRO). Journal of Geophysical Research, 2007, 112, .	3.3	796
75	Mineralogical structure of the subsurface of Syrtis Major from OMEGA observations of lobate ejecta blankets. Journal of Geophysical Research, 2007, 112, .	3.3	31
76	On the origin of perennial water ice at the south pole of Mars: A precession-controlled mechanism?. Journal of Geophysical Research, 2007, 112, .	3.3	40
77	Introduction to special section: OMEGA/Mars Express Mars Surface and Atmospheric Properties. Journal of Geophysical Research, 2007, 112, .	3.3	2
78	Hyperspectral imaging of convective CO ₂ ice clouds in the equatorial mesosphere of Mars. Journal of Geophysical Research, 2007, 112, .	3.3	81
79	Martian surface mineralogy from Observatoire pour la Min�ralogie, l'Eau, les Glaces et l'Activit� on board the Mars Express spacecraft (OMEGA/MEx): Global mineral maps. Journal of Geophysical Research, 2007, 112, .	3.3	191
80	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
81	On the origin of gypsum in the Mars north polar region. Journal of Geophysical Research, 2007, 112, .	3.3	103
82	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
83	Recovery of surface reflectance spectra and evaluation of the optical depth of aerosols in the near-IR using a Monte Carlo approach: Application to the OMEGA observations of high-latitude regions of Mars. Journal of Geophysical Research, 2007, 112, .	3.3	68
84	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
85	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
86	Early geochemical environment of Mars as determined from thermodynamics of phyllosilicates. Nature, 2007, 448, 60-63.	27.8	168
87	CIVA. Space Science Reviews, 2007, 128, 397-412.	8.1	47
88	A new method to investigate hyperspectral image cubes: An application of the wavelet transform. Journal of Geophysical Research, 2006, 111, .	3.3	5
89	No signature of clear CO ₂ ice from the "cryptic" regions in Mars' south seasonal polar cap. Nature, 2006, 442, 790-792.	27.8	54
90	Phyllosilicates on Mars and implications for early martian climate. Nature, 2005, 438, 623-627.	27.8	825

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91	Mars Surface Diversity as Revealed by the OMEGA/Mars Express Observations. Science, 2005, 307, 1576-1581.	12.6	842
92	Spectral Reflectance and Morphologic Correlations in Eastern Terra Meridiani, Mars. Science, 2005, 307, 1591-1594.	12.6	160
93	Olivine and Pyroxene Diversity in the Crust of Mars. Science, 2005, 307, 1594-1597.	12.6	348
94	Sulfates in Martian Layered Terrains: The OMEGA/Mars Express View. Science, 2005, 307, 1587-1591.	12.6	867
95	Summer Evolution of the North Polar Cap of Mars as Observed by OMEGA/Mars Express. Science, 2005, 307, 1581-1584.	12.6	142
96	Sulfates in the North Polar Region of Mars Detected by OMEGA/Mars Express. Science, 2005, 307, 1584-1586.	12.6	450
97	Perennial water ice identified in the south polar cap of Mars. Nature, 2004, 428, 627-630.	27.8	279
98	The Martian Surface Composition. Space Science Reviews, 2001, 96, 293-316.	8.1	21
99	Mineralogy of the Martian surface from Mars Express OMEGA observations. , 0, , 151-168.		7
100	Water on Mars. , 0, , 234-244.		0