Faith Vilas

List of Publications by Year
in descending order

106 papers	4,399 citations	117625 34 h-index	114465 63 g-index
106 all docs	106 docs citations	106 times ranked	2934 citing authors

#	Article	IF	Citations
1	Thermally altered subsurface material of asteroid (162173) Ryugu. Nature Astronomy, 2021, 5, 246-250.	10.1	47
2	Architectures and Technologies for a Space Telescope for Solar System Science. , 2021, 53, .		0
3	The science enabled by a dedicated solar system space telescope. , 2021, 53, .		1
4	The Small Satellites of the Solar System: Priorities for the Decadal Study. , 2021, 53, .		0
5	Spectrophotometric Properties of 162173 Ryuguâ€™s Surface from the NIRS3 Opposition Observations. Planetary Science Journal, 2021, 2, 178.	3.6	3
6	Spectrally blue hydrated parent body of asteroid (162173) Ryugu. Nature Communications, 2021, 12, 5837.	12.8	23
7	Global photometric properties of (162173) Ryugu. Astronomy and Astrophysics, 2020, 639, A83.	5.1	37
8	Editorial: Introducing the Planetary Science Journal. Planetary Science Journal, 2020, 1, 1.	3.6	1
9	Nadine G. Barlow (1958â€“2020). , 2020, 52, .		0
10	Multivariable statistical analysis of spectrophotometry and spectra of (162173) Ryugu as observed by JAXA Hayabusa2 mission. Astronomy and Astrophysics, 2019, 629, A13.	5.1	15
11	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. Science, 2019, 364, 272-275.	12.6	262
12	The geomorphology, color, and thermal properties of Ryugu: Implications for parent-body processes. Science, 2019, 364, 252.	12.6	313
13	Diurnally Migrating Lunar Water: Evidence From Ultraviolet Data. Geophysical Research Letters, 2019, 46, 2417-2424.	4.0	49
14	Câ€Complex Asteroids: UVâ€Visible Spectral Characteristics and Implications for Space Weathering Effects. Geophysical Research Letters, 2019, 46, 14307-14317.	4.0	17
15	Vis-NIR disk-integrated photometry of asteroid 25143 Itokawa around opposition by AMICA/Hayabusa. Icarus, 2018, 311, 175-196.	2.5	15
16	New candidates for active asteroids: Main-belt (145) Adeona, (704) Interamnia, (779) Nina, (1474) Beira, and near-Earth (162,173) Ryugu. Icarus, 2018, 304, 83-94.	2.5	18
17	Mercuryâ€™s Hollows. , 2018, , 324-345.		12
18	Plasma Interactions with the Space Environment in the Acceleration Region: Indications of CME-trailing Reconnection Regions. Astrophysical Journal, 2018, 861, 118.	4.5	8

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19	Asteroid, Meteoroid, and Spacecraft Reentry Accidents. , 2016, , 905-908.		0
20	Ceres: Sulfur deposits and graphitized carbon. Geophysical Research Letters, 2016, 43, 8920-8927.	4.0	36
21	Regional spectrophotometric properties of 951 Gaspra. Icarus, 2016, 280, 340-358.	2.5	3
22	The <scp>UV</scp> signature of carbon in the solar system. Meteoritics and Planetary Science, 2016, 51, 105-115.	1.6	21
23	Mineralogical indicators of Mercury's hollows composition in MESSENGER color observations. Geophysical Research Letters, 2016, 43, 1450-1456.	4.0	42
24	Space Weathering of S-Complex Asteroids Manifested in the UV/Blue: Recent Insights and Future Directions. Proceedings of the International Astronomical Union, 2015, 10, 201-205.	0.0	0
25	THE UV/BLUE EFFECTS OF SPACE WEATHERING MANIFESTED IN S-COMPLEX ASTEROIDS. I. QUANTIFYING CHANGE WITH ASTEROID AGE. Astronomical Journal, 2015, 150, 64.	4.7	14
26	The UV/blue effects of space weathering manifested in S-complex asteroids II: Probing for less-weathered objects in the Solar System. Planetary and Space Science, 2015, 118, 273-276.	1.7	3
27	Orbital multispectral mapping of Mercury with the MESSENGER Mercury Dual Imaging System: Evidence for the origins of plains units and low-reflectance material. Icarus, 2015, 254, 287-305.	2.5	95
28	The low-iron, reduced surface of Mercury as seen in spectral reflectance by MESSENGER. Icarus, 2014, 228, 364-374.	2.5	82
29	Spectral absorptions on Phobos and Deimos in the visible/near infrared wavelengths and their compositional constraints. Icarus, 2014, 229, 196-205.	2.5	66
30	Mercuryâ€™s Weather-Beaten Surface: Understanding Mercury in the Context of Lunar and Asteroidal Space Weathering Studies. Space Science Reviews, 2014, 181, 121-214.	8.1	108
31	MESSENGER Observations of Magnetohydrodynamic Waves in the Solar Corona from Faraday Rotation. Solar Physics, 2013, 285, 71-82.	2.5	17
32	Measurements of Faraday Rotation Through the Solar Corona During the 2009 Solar Minimum with the MESSENGER Spacecraft. Solar Physics, 2013, 285, 83-95.	2.5	15
33	Characterization of the morphometry of impact craters hosting polar deposits in Mercury's north polar region. Journal of Geophysical Research, 2012, 117, .	3.3	17
34	LCROSS (Lunar Crater Observation and Sensing Satellite) Observation Campaign: Strategies, Implementation, and Lessons Learned. Space Science Reviews, 2012, 167, 93-140.	8.1	19
35	Mercury's spectrophotometric properties: Update from the Mercury Dual Imaging System observations during the third MESSENGER flyby. Planetary and Space Science, 2011, 59, 1853-1872.	1.7	22
36	METHANE AND NITROGEN ABUNDANCES ON PLUTO AND ERIS. Astrophysical Journal, 2010, 725, 1296-1305.	4.5	63

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37	Whole-disk spectrophotometric properties of Mercury: Synthesis of MESSENGER and ground-based observations. Icarus, 2010, 209, 101-124.	2.5	35
38	The 506nm absorption feature in pyroxene spectra: Nature and implications for spectroscopy-based studies of pyroxene-bearing targets. Icarus, 2010, 207, 295-313.	2.5	14
39	The Fate of Amino Acids During Simulated Meteoritic Impact. Astrobiology, 2009, 9, 943-951.	3.0	29
40	Digging into the surface of the icy dwarf planet Eris. Icarus, 2009, 199, 520-525.	2.5	15
41	Near-infrared spectrophotometry of Asteroid 25143 Itokawa from NIRS on the Hayabusa spacecraft. Icarus, 2008, 194, 137-145.	2.5	33
42	Multi-wavelength observations of Asteroid 2100 Ra-Shalom. Icarus, 2008, 193, 20-38.	2.5	34
43	Evidence of N2-ice on the surface of the icy dwarf Planet 136472 (2005 FY9). Icarus, 2008, 195, 844-850.	2.5	40
44	The 2004 Las Campanas/Lowell Observatory Itokawa campaign: I. Simultaneous visible and near-infrared photometry of the Hayabusa mission target. Earth, Planets and Space, 2008, 60, 39-48.	2.5	9
45	The 2004 Las Campanas/Lowell Observatory campaign II. Surface properties of Hayabusa target Asteroid 25143 Itokawa inferred from Hapke modeling. Earth, Planets and Space, 2008, 60, 49-59.	2.5	12
46	A newly-identified spectral reflectance signature near the lunar South pole and the South Pole-Aitken Basin. Earth, Planets and Space, 2008, 60, 67-74.	2.5	15
47	Spectroscopic Observations of Mercury's Surface Reflectance During MESSENGER's First Mercury Flyby. Science, 2008, 321, 62-65.	12.6	94
48	SPECTRAL CHARACTERISTICS OF HAYABUSA 2 NEAR-EARTH ASTEROID TARGETS 162173 1999 JU3 AND 2001 QC34. Astronomical Journal, 2008, 135, 1101-1105.	4.7	81
49	Optical Spectroscopy of the Large Kuiper Belt Objects 136472 (2005 FY9) and 136108 (2003 EL61). Astronomical Journal, 2007, 133, 526-530.	4.7	39
50	Local topographic effects on photometry and reflectance spectra of planetary surfaces: An example based on lunar photometry. Meteoritics and Planetary Science, 2007, 42, 1801-1816.	1.6	12
51	Mineralogical composition of (25143) Itokawa 1998 SF₃₆ from visible and nearâ€infrared reflectance spectroscopy: Evidence for partial melting. Meteoritics and Planetary Science, 2007, 42, 2165-2177.	1.6	25
52	Exploring the asteroid belt with ion propulsion: Dawn mission history, status and plans. Advances in Space Research, 2007, 40, 193-201.	2.6	32
53	Near-Infrared Spectral Results of Asteroid Itokawa from the Hayabusa Spacecraft. Science, 2006, 312, 1334-1338.	12.6	147
54	The Effects of Space Weathering at UV Wavelengths: S-Class Asteroids. Astronomical Journal, 2006, 132, 1396-1404.	4.7	60

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55	Aqueous alteration affecting the irregular outer planets satellites: Evidence from spectral reflectance. Icarus, 2006, 180, 453-463.	2.5	17
56	Detection and discrimination of sulfate minerals using reflectance spectroscopy. Icarus, 2006, 184, 121-157.	2.5	317
57	Asteroid, Meteoroid, and Spacecraft Reentry Accidents. , 2006, , 838-841.		0
58	How much material do the radar-bright craters at the Mercurian poles contain?. Planetary and Space Science, 2005, 53, 1496-1500.	1.7	13
59	Physical characteristics of Hayabusa target Asteroid 25143 Itokawa. Icarus, 2005, 173, 153-165.	2.5	32
60	Deep Impact: Observations from a Worldwide Earth-Based Campaign. Science, 2005, 310, 265-269.	12.6	182
61	Iapetus dark and bright material:. Icarus, 2004, 170, 125-130.	2.5	7
62	Investigating the Vestaâ€“vestoidâ€“HED connection. Icarus, 2004, 167, 360-368.	2.5	19
63	Spectrophotometry of Kuiper Belt Objects 20000 Varuna, 2000 EB173 and Centaur 10199 Chariklo. , 2004, , 193-199.		1
64	Spectrophotometry of Kuiper Belt Objects 20000 Varuna, 2000 Eb173and Centaur 10199 Chariklo. Earth, Moon and Planets, 2003, 92, 193-199.	0.6	6
65	Vesta's UV lightcurve: hemispheric variationin brightness and spectral reversal. Icarus, 2003, 162, 1-9.	2.5	14
66	Quantified mineralogical evidence for a common origin of 1929 Kollaa with 4 Vesta and the HED meteorites. Icarus, 2003, 165, 215-218.	2.5	34
67	Hydrated Minerals on Asteroids:. , 2002, , 235-254.		143
68	The mystery of 506.5 nm feature of reflectance spectra of Vesta and Vestoids: Evidence for space weathering?. Earth, Planets and Space, 2001, 53, 1071-1075.	2.5	24
69	Closing in on HED meteorite sources. Earth, Planets and Space, 2001, 53, 1077-1083.	2.5	13
70	<title>SWUIS-A: a versatile low-cost UV/VIS/IR imaging system for airborne astronomy and aeronomy research</title>. , 2000, , .		0
71	JVI Himalia: New Compositional Evidence and Interpretations for the Origin of Jupiter's Small Satellites. Icarus, 2000, 145, 445-453.	2.5	27
72	Are Hyperion and Phoebe Linked to Iapetus?. Icarus, 2000, 146, 125-132.	2.5	41

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73	Vesta and the Vestoids: A New Rock Group?. Icarus, 2000, 147, 119-128.	2.5	46
74	Low-cost airborne astronomy imager to begin research phase. Eos, 2000, 81, 101-105.	0.1	4
75	Mercurian Impact Craters: Implications for Polar Ground Ice. Icarus, 1999, 141, 194-204.	2.5	25
76	The Changing Spectrum of Vesta: Rotationally Resolved Spectroscopy of Pyroxene on the Surface. Icarus, 1998, 134, 207-212.	2.5	33
77	The McDonald Observatory Serendipitous UV/Blue Spectral Survey of Asteroids. Icarus, 1997, 127, 121-129.	2.5	17
78	Extracting Spectral Information about 253 Mathilde Using the NEAR Photometry. Icarus, 1997, 129, 440-449.	2.5	12
79	Discovery and Analysis of Minor Absorption Bands in S-Asteroid Visible Reflectance Spectra. Icarus, 1996, 119, 202-208.	2.5	34
80	Unraveling the Zebra: Clues to the Iapetus Dark Material Composition. Icarus, 1996, 124, 262-267.	2.5	34
81	Are Low-Albedo Asteroids Thermally Metamorphosed?. Icarus, 1996, 124, 483-489.	2.5	33
82	Is the U-B Color Sufficient for Identifying Water of Hydration on Solar System Bodies?. Icarus, 1995, 115, 217-218.	2.5	12
83	Iron Alteration Minerals in the Visible and Near-Infrared Spectra of Low-Albedo Asteroids. Icarus, 1994, 109, 274-283.	2.5	99
84	A Cheaper, Faster, Better Way to Detect Water of Hydration on Solar System Bodies. Icarus, 1994, 111, 456-467.	2.5	154
85	Ferric Iron in Primitive Asteroids: A 0.43-Î¼m Absorption Feature. Icarus, 1993, 102, 225-231.	2.5	53
86	CCD Reflectance Spectra of Selected Asteroids. II. Low-Albedo Asteroid Spectra and Data Extraction Techniques. Icarus, 1993, 105, 67-78.	2.5	51
87	Space station freedom debris protection techniques. Advances in Space Research, 1993, 13, 191-200.	2.6	5
88	CCD reflectance spectra of selected asteroids. Icarus, 1992, 100, 85-94.	2.5	57
89	Thermal models applicable for visual and infrared studies of orbital debris. Advances in Space Research, 1990, 10, 377-380.	2.6	4
90	The detection of earth orbiting objects by IRAS. Advances in Space Research, 1990, 10, 381-384.	2.6	1

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91	Phyllosilicate Absorption Features in Main-Belt and Outer-Belt Asteroid Reflectance Spectra. Science, 1989, 246, 790-792.	12.6	185
92	Structure of scintillations in Neptune's occultation shadow. Astrophysical Journal, 1988, 325, 490.	4.5	21
93	Coronagraph for astronomical imaging and spectrophotometry. Applied Optics, 1987, 26, 664.	2.1	7
94	Oblateness, radius, and mean stratospheric temperature of Neptune from the 1985 August 20 occultation. Icarus, 1987, 72, 635-646.	2.5	31
95	Occultation detection of a neptunian ring-like arc. Nature, 1986, 319, 636-640.	27.8	86
96	A CCD search for geosynchronous debris. Icarus, 1986, 68, 412-417.	2.5	6
97	Neptune's rings. Nature, 1986, 319, 616-616.	27.8	2
98	Occultation determination of Neptune's oblateness and stratospheric methane mixing ratio. Nature, 1986, 324, 227-231.	27.8	28
99	Physical parameters of near-Earth asteroid 1982 DV. Icarus, 1985, 63, 201-205.	2.5	8
100	Mercury: Absence of crystalline Fe2+ in the regolith. Icarus, 1985, 64, 133-138.	2.5	85
101	Reflectance spectrophotometry (â^¼0.5â€“1.0 Î¼m) of outer-belt asteroids: Implications for primitive, organic solar system material. Icarus, 1985, 64, 503-516.	2.5	68
102	Results from observations of the 15 June 1983 occultation by the Neptune system. Astronomical Journal, 1985, 90, 655.	4.7	27
103	The dependence of reflectance spectra of Mercury on surface terrain. Icarus, 1984, 59, 60-68.	2.5	52
104	A charge-coupled device observation of Charon. Icarus, 1983, 56, 75-79.	2.5	5
105	Lunar occultations from Cerro Tololo. II. Angular diameters for xi2 SGR and pi Leo.. Publications of the Astronomical Society of the Pacific, 1977, 89, 95.	3.1	8
106	Mercury: Spectral reflectance measurements (0.33â€“1.06 Î¼m) 1974/1975. Icarus, 1976, 28, 593-599.	2.5	46