

Victoria E Hamilton

List of Publications by Year in descending order

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88
papers

8,809
citations

61984

43
h-index

56724

83
g-index

91
all docs

91
docs citations

91
times ranked

4176
citing authors

#	ARTICLE	IF	CITATIONS
1	Mars Global Surveyor Thermal Emission Spectrometer experiment: Investigation description and surface science results. <i>Journal of Geophysical Research</i> , 2001, 106, 23823-23871.	3.3	903
2	A Global View of Martian Surface Compositions from MGS-TES. <i>Science</i> , 2000, 287, 1626-1630.	12.6	613
3	Detection of crystalline hematite mineralization on Mars by the Thermal Emission Spectrometer: Evidence for near-surface water. <i>Journal of Geophysical Research</i> , 2000, 105, 9623-9642.	3.3	427
4	OSIRIS-REx: Sample Return from Asteroid (101955) Bennu. <i>Space Science Reviews</i> , 2017, 212, 925-984.	8.1	426
5	Chloride-Bearing Materials in the Southern Highlands of Mars. <i>Science</i> , 2008, 319, 1651-1654.	12.6	381
6	Mineralogy at Meridiani Planum from the Mini-TES Experiment on the Opportunity Rover. <i>Science</i> , 2004, 306, 1733-1739.	12.6	370
7	Morphology and Composition of the Surface of Mars: Mars Odyssey THEMIS Results. <i>Science</i> , 2003, 300, 2056-2061.	12.6	368
8	The unexpected surface of asteroid (101955) Bennu. <i>Nature</i> , 2019, 568, 55-60.	27.8	364
9	A thermal emission spectral library of rock-forming minerals. <i>Journal of Geophysical Research</i> , 2000, 105, 9735-9739.	3.3	326
10	Evidence for widespread hydrated minerals on asteroid (101955) Bennu. <i>Nature Astronomy</i> , 2019, 3, 332-340.	10.1	251
11	Identification of a basaltic component on the Martian surface from Thermal Emission Spectrometer data. <i>Journal of Geophysical Research</i> , 2000, 105, 9609-9621.	3.3	250
12	Characterization and petrologic interpretation of olivine-rich basalts at Gusev Crater, Mars. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	227
13	Global distribution, composition, and abundance of olivine on the surface of Mars from thermal infrared data. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	189
14	Properties of rubble-pile asteroid (101955) Bennu from OSIRIS-REx imaging and thermal analysis. <i>Nature Astronomy</i> , 2019, 3, 341-351.	10.1	188
15	Evidence for extensive, olivine-rich bedrock on Mars. <i>Geology</i> , 2005, 33, 433.	4.4	182
16	Evidence for magmatic evolution and diversity on Mars from infrared observations. <i>Nature</i> , 2005, 436, 504-509.	27.8	177
17	Initial Results from the Mini-TES Experiment in Gusev Crater from the Spirit Rover. <i>Science</i> , 2004, 305, 837-842.	12.6	168
18	The OSIRIS-REx target asteroid (101955) Bennu: Constraints on its physical, geological, and dynamical nature from astronomical observations. <i>Meteoritics and Planetary Science</i> , 2015, 50, 834-849.	1.6	168

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19	Searching for the source regions of martian meteorites using MGS TES: Integrating martian meteorites into the global distribution of igneous materials on Mars. <i>Meteoritics and Planetary Science</i> , 2003, 38, 871-885.	1.6	157
20	Analysis of terrestrial and Martian volcanic compositions using thermal emission spectroscopy: 2. Application to Martian surface spectra from the Mars Global Surveyor Thermal Emission Spectrometer. <i>Journal of Geophysical Research</i> , 2001, 106, 14733-14746.	3.3	126
21	Analysis of terrestrial and Martian volcanic compositions using thermal emission spectroscopy: 1. Determination of mineralogy, chemistry, and classification strategies. <i>Journal of Geophysical Research</i> , 2001, 106, 14711-14732.	3.3	124
22	Thermal infrared emission spectroscopy of the pyroxene mineral series. <i>Journal of Geophysical Research</i> , 2000, 105, 9701-9716.	3.3	113
23	Curiosity's rover environmental monitoring station: Overview of the first 100 sols. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1680-1688.	3.6	112
24	Identification of quartzofeldspathic materials on Mars. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	110
25	Thermal infrared (vibrational) spectroscopy of Mg-Fe olivines: A review and applications to determining the composition of planetary surfaces. <i>Chemie Der Erde</i> , 2010, 70, 7-33.	2.0	107
26	Determining the modal mineralogy of mafic and ultramafic igneous rocks using thermal emission spectroscopy. <i>Journal of Geophysical Research</i> , 2000, 105, 9717-9733.	3.3	106
27	Chemistry, mineralogy, and grain properties at Namib and High dunes, Bagnold dune field, Gale crater, Mars: A synthesis of Curiosity rover observations. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2510-2543.	3.6	95
28	The OSIRIS-REx Thermal Emission Spectrometer (OTES) Instrument. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	94
29	Surface and crater-exposed lithologic units of the Isidis Basin as mapped by coanalysis of THEMIS and TES derived data products. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	86
30	Variations in color and reflectance on the surface of asteroid (101955) Bennu. <i>Science</i> , 2020, 370, .	12.6	84
31	Asteroid (101955) Bennu's weak boulders and thermally anomalous equator. <i>Science Advances</i> , 2020, 6, .	10.3	83
32	Determination of Martian meteorite lithologies and mineralogies using vibrational spectroscopy. <i>Journal of Geophysical Research</i> , 1997, 102, 25593-25603.	3.3	79
33	Visible, near-infrared, and middle infrared spectroscopy of altered basaltic tephra: Spectral signatures of phyllosilicates, sulfates, and other aqueous alteration products with application to the mineralogy of the Columbia Hills of Gusev Crater, Mars. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	79
34	Bright carbonate veins on asteroid (101955) Bennu: Implications for aqueous alteration history. <i>Science</i> , 2020, 370, .	12.6	71
35	Observations and preliminary science results from the first 100 sols of MSL Rover Environmental Monitoring Station ground temperature sensor measurements at Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 745-770.	3.6	67
36	Evidence for extensive olivine-rich basalt bedrock outcrops in Ganges and Eos chasmas, Mars. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	64

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37	Mineralogy of Martian atmospheric dust inferred from thermal infrared spectra of aerosols. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	58
38	Exogenic basalt on asteroid (101955) Bennu. <i>Nature Astronomy</i> , 2021, 5, 31-38.	10.1	57
39	Widespread carbon-bearing materials on near-Earth asteroid (101955) Bennu. <i>Science</i> , 2020, 370, .	12.6	56
40	The meteorology of Gale crater as determined from rover environmental monitoring station observations and numerical modeling. Part I: Comparison of model simulations with observations. <i>Icarus</i> , 2016, 280, 103-113.	2.5	54
41	Lucy Mission to the Trojan Asteroids: Science Goals. <i>Planetary Science Journal</i> , 2021, 2, 171.	3.6	54
42	Heterogeneous mass distribution of the rubble-pile asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	10.3	50
43	Characteristics of pebble- and cobble-sized clasts along the Curiosity rover traverse from Bradbury Landing to Rocknest. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 2361-2380.	3.6	44
44	Terrain physical properties derived from orbital data and the first 360 sols of Mars Science Laboratory Curiosity rover observations in Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1322-1344.	3.6	43
45	Visible/near-infrared spectral diversity from in situ observations of the Bagnold Dune Field sands in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2655-2684.	3.6	40
46	Spacecraft sample collection and subsurface excavation of asteroid (101955) Bennu. <i>Science</i> , 2022, 377, 285-291.	12.6	39
47	The Thermophysical Properties of the Bagnold Dunes, Mars: Ground-Truthing Orbital Data. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1307-1326.	3.6	34
48	A search for basaltic-to-intermediate glasses on Mars: Assessing martian crustal mineralogy. <i>Icarus</i> , 2010, 210, 135-149.	2.5	32
49	Compositional provinces of Mars from statistical analyses of TES, GRS, OMEGA and CRISM data. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 62-91.	3.6	32
50	The first samples from Almahata Sitta showing contacts between ureilitic and chondritic lithologies: Implications for the structure and composition of asteroid 2008 TC ₃ . <i>Meteoritics and Planetary Science</i> , 2019, 54, 2769-2813.	1.6	32
51	Evidence for limited compositional and particle size variation on asteroid (101955) Bennu from thermal infrared spectroscopy. <i>Astronomy and Astrophysics</i> , 2021, 650, A120.	5.1	30
52	Distribution and characteristics of Adirondack-class basalt as observed by Mini-TES in Gusev crater, Mars and its possible volcanic source. <i>Icarus</i> , 2012, 218, 917-949.	2.5	29
53	Accuracy of plagioclase compositions from laboratory and Mars spacecraft thermal emission spectra. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	27
54	OSIRIS-REx spectral analysis of (101955) Bennu by multivariate statistics. <i>Astronomy and Astrophysics</i> , 2020, 637, L4.	5.1	23

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55	Phase reddening on asteroid Bennu from visible and near-infrared spectroscopy. <i>Astronomy and Astrophysics</i> , 2020, 644, A142.	5.1	22
56	Weak spectral features on (101995) Bennu from the OSIRIS-REx Visible and InfraRed Spectrometer. <i>Astronomy and Astrophysics</i> , 2020, 644, A148.	5.1	22
57	Lucy Mission to the Trojan Asteroids: Instrumentation and Encounter Concept of Operations. <i>Planetary Science Journal</i> , 2021, 2, 172.	3.6	21
58	Shergottite Northwest Africa 6963: A Pyroxene-Cumulate Martian Gabbro. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1823-1841.	3.6	20
59	Geologic characteristics of relatively high thermal inertia intracrater deposits in southwestern Margaritifer Terra, Mars. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	16
60	Discrimination of glass and phyllosilicate minerals in thermal infrared data. <i>Journal of Geophysical Research</i> , 2005, 110, n/a-n/a.	3.3	15
61	Seeking phyllosilicates in thermal infrared data: A laboratory and Martian data case study. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	15
62	Signatures of the post-hydration heating of highly aqueously altered CM carbonaceous chondrites and implications for interpreting asteroid sample returns. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 289, 69-92.	3.9	15
63	The Role of Hydrated Minerals and Space Weathering Products in the Bluing of Carbonaceous Asteroids. <i>Planetary Science Journal</i> , 2021, 2, 68.	3.6	14
64	Effects of small crystallite size on the thermal infrared (vibrational) spectra of minerals. <i>American Mineralogist</i> , 2020, 105, 1756-1760.	1.9	13
65	Assessing the Sampleability of Bennu's Surface for the OSIRIS-REx Asteroid Sample Return Mission. <i>Space Science Reviews</i> , 2022, 218, 20.	8.1	12
66	Machine Learning Mid-Infrared Spectral Models for Predicting Modal Mineralogy of CI/CM Chondritic Asteroids and Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE007035.	3.6	11
67	Meteoritic evidence for a Ceres-sized water-rich carbonaceous chondrite parent asteroid. <i>Nature Astronomy</i> , 2021, 5, 350-355.	10.1	10
68	Spectral Characterization of Bennu Analogs Using PASCALE: A New Experimental Set-Up for Simulating the Near-Surface Conditions of Airless Bodies. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006624.	3.6	10
69	Composition of organics on asteroid (101955) Bennu. <i>Astronomy and Astrophysics</i> , 2021, 653, L1.	5.1	10
70	Mid-infrared emissivity of partially dehydrated asteroid (162173) Ryugu shows strong signs of aqueous alteration. <i>Nature Communications</i> , 2022, 13, 364.	12.8	10
71	In search of Bennu analogs: Hapke modeling of meteorite mixtures. <i>Astronomy and Astrophysics</i> , 2021, 648, A88.	5.1	9
72	Spectrophotometric Modeling and Mapping of (101955) Bennu. <i>Planetary Science Journal</i> , 2021, 2, 117.	3.6	9

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73	Evidence for locally derived, ultramafic intracrater materials in Amazonis Planitia, Mars. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	8
74	Visible to near-IR multispectral orbital observations of Mars. , 2008, , 169-192.		8
75	The complex relationship between olivine abundance and thermal inertia on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1293-1320.	3.6	8
76	Olivine and carbonate-rich bedrock in Gusev crater and the Nili Fossae region of Mars may be altered ignimbrite deposits. <i>Icarus</i> , 2022, 380, 114974.	2.5	8
77	Thermal infrared emission spectroscopy of titanium-enriched pyroxenes. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	7
78	Global mineralogy mapped from the Mars Global Surveyor Thermal Emission Spectrometer. , 2008, , 193-220.		7
79	Visible“near infrared spectral indices for mapping mineralogy and chemistry with OSIRIS-REx. <i>Meteoritics and Planetary Science</i> , 2020, 55, 744-765.	1.6	7
80	The compositional diversity and physical properties mapped from the Mars Odyssey Thermal Emission Imaging System. , 2008, , 221-241.		6
81	Spectral analysis of craters on (101955) Bennu. <i>Icarus</i> , 2021, 357, 114252.	2.5	6
82	GRO 95577 (CR1) as a mineralogical analogue for asteroid (101955) Bennu. <i>Icarus</i> , 2022, 383, 115054.	2.5	6
83	A Novel Atmospheric Removal Technique for TES Spectra Applied to Olivine and Carbonate-Rich Bedrock in the Nili Fossae Region, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006822.	3.6	5
84	High-Resolution Thermophysical Analysis of the OSIRIS-REx Sample Site and Three Other Regions of Interest on Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	5
85	Nano-FTIR Investigation of the CM Chondrite Allan Hills 83100. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	2
86	Thermal Infrared Spectral Analyses of Mars from Orbit Using the Thermal Emission Spectrometer and Thermal Emission Imaging System. , 2019, , 484-498.		1
87	Thermal Infrared Remote Sensing of Mars from Rovers Using the Miniature Thermal Emission Spectrometer. , 2019, , 499-512.		1
88	Linear Modeling of Spectra of Fine Particulate Materials: Implications for Compositional Analyses of Primitive Asteroids. <i>Earth and Space Science</i> , 2022, 9, .	2.6	1