David Crown

List of Publications by Year
in descending order

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95 papers	6,725 citations	81900 39 h-index	60623 81 g-index
96 all docs	96 docs citations	96 times ranked	3189 citing authors

#	Article	IF	Citations
1	Martian volcanism: Current state of knowledge and known unknowns. Chemie Der Erde, 2022, 82, 125886.	2.0	3
2	Distribution and Morphology of Lava Tube Systems on the Western Flank of Alba Mons, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	3
3	Ice-rich landforms of the southern mid-latitudes of Mars: A case study in Nereidum Montes. Icarus, 2021, 355, 114170.	2.5	9
4	The Circum-Hellas Province. , 2021, , 92-120.		0
5	The Tharsis Province. , 2021, , 36-68.		0
6	Areography. , 2021, , 20-35.		0
7	The Importance of Field Studies for Closing Key Knowledge Gaps in Planetary Science. , 2021, 53, .		0
8	Planetary Geologic Mapping. , 2021, 53, .		0
9	Volcanic Caves as Priority Sites for Astrobiology Science. , 2021, 53, .		2
10	Igneous composition. , 2021, , 162-189.		0
11	The Oldest Highlands of Mars May Be Massive Dust Fallout Deposits. Scientific Reports, 2020, 10, 10347.	3.3	7
12	Geology of the northeastern flank of Apollinaris Mons, Mars: Constraints on the erosional history from morphology, topography, and crater populations. Icarus, 2019, 333, 385-403.	2.5	6
13	The Unusual Thermophysical and Surface Properties of the Daedalia Planum Lava Flows. Journal of Geophysical Research E: Planets, 2019, 124, 1945-1959.	3.6	5
14	A Global Inventory of Iceâ€Related Morphological Features on Dwarf Planet Ceres: Implications for the Evolution and Current State of the Cryosphere. Journal of Geophysical Research E: Planets, 2019, 124, 1650-1689.	3.6	33
15	Glaciovolcanism in the Tharsis volcanic province of Mars: Implications for regional geology and hydrology. Planetary and Space Science, 2019, 169, 45-69.	1.7	13
16	Assessing the formation of valley networks on a cold early Mars: Predictions for erosion rates and channel morphology. Icarus, 2019, 321, 216-231.	2.5	8
17	Formation of outflow channels on Mars: Testing the origin of Reull Vallis in Hesperia Planum by large-scale lava-ice interactions and top-down melting. Icarus, 2018, 305, 56-79.	2.5	12
18	Large-scale lava-ice interactions on Mars: Investigating its role during Late Amazonian Central Elysium Planitia volcanism and the formation of Athabasca Valles. Planetary and Space Science, 2018, 158, 96-109.	1.7	17

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19	The geology of the occator quadrangle of dwarf planet Ceres: Floor-fractured craters and other geomorphic evidence of cryomagmatism. Icarus, 2018, 316, 128-139.	2.5	26
20	Geological mapping of the Ac-10 Rongo Quadrangle of Ceres. Icarus, 2018, 316, 140-153.	2.5	16
21	Geologic mapping of the Urvara and Yalode Quadrangles of Ceres. Icarus, 2018, 316, 167-190.	2.5	23
22	The geology of the Nawish quadrangle of Ceres: The rim of an ancient basin. Icarus, 2018, 316, 114-127.	2.5	6
23	Evolution of Occator Crater on (1) Ceres. Astronomical Journal, 2017, 153, 112.	4.7	50
24	Pitted terrains on (1) Ceres and implications for shallow subsurface volatile distribution. Geophysical Research Letters, 2017, 44, 6570-6578.	4.0	48
25	Morphologic and thermophysical characteristics of lava flows southwest of Arsia Mons, Mars. Journal of Volcanology and Geothermal Research, 2017, 342, 13-28.	2.1	28
26	THE HAMO-BASED GLOBAL GEOLOGIC MAP OF CERES FROM NASAâ€™S DAWN MISSION. , 2017, , .		2
27	Satellite-Based Thermophysical Analysis of Volcaniclastic Deposits: A Terrestrial Analog for Mantled Lava Flows on Mars. Remote Sensing, 2016, 8, 152.	4.0	5
28	Lava heating and loading of ice sheets on early Mars: Predictions for meltwater generation, groundwater recharge, and resulting landforms. Icarus, 2016, 271, 237-264.	2.5	20
29	Zumba crater, Daedalia Planum, Mars: Geologic investigation of a young, rayed impact crater and its secondary field. Icarus, 2016, 269, 75-90.	2.5	10
30	What can thermal infrared remote sensing of terrestrial volcanoes tell us about processes past and present on Mars?. Journal of Volcanology and Geothermal Research, 2016, 311, 198-216.	2.1	10
31	UPDATE ON THE GLOBAL GEOLOGIC MAP OF CERES FROM NASAâ€™S DAWN MISSION. , 2016, , .		2
32	Comparison of â€œwarm and wetâ€•and â€œcold and icyâ€•scenarios for early Mars in a 3â€Ð climate model. Journal of Geophysical Research E: Planets, 2015, 120, 1201-1219.	3.6	153
33	Sources of water for the outflow channels on Mars: Implications of the Late Noachian â€œicy highlandsâ€•model for melting and groundwater recharge on the Tharsis rise. Planetary and Space Science, 2015, 108, 54-65.	1.7	26
34	Glaciation in the Late Noachian Icy Highlands: Ice accumulation, distribution, flow rates, basal melting, and top-down melting rates and patterns. Planetary and Space Science, 2015, 106, 82-98.	1.7	86
35	Volcanism on Mars. , 2015, , 717-728.		9
36	Formation and mantling ages of lobate debris aprons on Mars: Insights from categorized crater counts. Planetary and Space Science, 2015, 111, 83-99.	1.7	33

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37	Firn densification in a Late Noachian â€œicy highlandsâ€•Mars: Implications for ice sheet evolution and thermal response. Icarus, 2015, 253, 243-255.	2.5	25
38	Late Noachian fluvial erosion on Mars: Cumulative water volumes required to carve the valley networks and grain size of bed-sediment. Planetary and Space Science, 2015, 117, 429-435.	1.7	21
39	Lunar floor-fractured craters as magmatic intrusions: Geometry, modes of emplacement, associated tectonic and volcanic features, and implications for gravity anomalies. Icarus, 2015, 248, 424-447.	2.5	71
40	Volcanoâ€“ice interactions in the Arsia Mons tropical mountain glacier deposits. Icarus, 2014, 237, 315-339.	2.5	40
41	Sequestered glacial ice contribution to the global Martian water budget: Geometric constraints on the volume of remnant, midlatitude debris-covered glaciers. Journal of Geophysical Research E: Planets, 2014, 119, 2188-2196.	3.6	78
42	The climate history of early Mars: insights from the Antarctic McMurdo Dry Valleys hydrologic system. Antarctic Science, 2014, 26, 774-800.	0.9	84
43	Lunar floorâ€fractured craters: Classification, distribution, origin and implications for magmatism and shallow crustal structure. Journal of Geophysical Research, 2012, 117, .	3.3	99
44	Hollows on Mercury: MESSENGER Evidence for Geologically Recent Volatile-Related Activity. Science, 2011, 333, 1856-1859.	12.6	136
45	Secondary chaotic terrain formation in the higher outflow channels of southern circum-Chryse, Mars. Icarus, 2011, 213, 150-194.	2.5	17
46	Volcanism on Io: New insights from global geologic mapping. Icarus, 2011, 214, 91-112.	2.5	67
47	Watershed modeling in the Tyrrhena Terra region of Mars. Journal of Geophysical Research, 2010, 115, .	3.3	18
48	Northern mid-latitude glaciation in the Late Amazonian period of Mars: Criteria for the recognition of debris-covered glacier and valley glacier landsystem deposits. Earth and Planetary Science Letters, 2010, 294, 306-320.	4.4	154
49	Geologic history of Mars. Earth and Planetary Science Letters, 2010, 294, 185-203.	4.4	538
50	Degradation of mid-latitude craters on Mars. Icarus, 2009, 200, 77-95.	2.5	42
51	The Circum-Hellas Volcanic Province, Mars: Overview. Planetary and Space Science, 2009, 57, 895-916.	1.7	83
52	A recent ice age on Mars: Evidence for climate oscillations from regional layering in midâ€latitude mantling deposits. Geophysical Research Letters, 2009, 36, .	4.0	63
53	Origin of the Medusae Fossae Formation, Mars: Insights from a synoptic approach. Journal of Geophysical Research, 2008, 113, .	3.3	141
54	Tyrrhena Patera: Geologic history derived from Mars Express High Resolution Stereo Camera. Journal of Geophysical Research, 2008, 113, .	3.3	42

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55	Heat transfer in volcanoâ€“ice interactions on Mars: synthesis of environments and implications for processes and landforms. Annals of Glaciology, 2007, 45, 1-13.	1.4	54
56	Hadriaca Patera: Insights into its volcanic history from Mars Express High Resolution Stereo Camera. Journal of Geophysical Research, 2007, 112, .	3.3	38
57	Geologic mapping of the Amiraniâ€“Gish Bar region of Io: Implications for the global geologic mapping of Io. Icarus, 2007, 186, 204-217.	2.5	17
58	Martian gullies in the southern mid-latitudes of Mars: Evidence for climate-controlled formation of young fluvial features based upon local and global topography. Icarus, 2007, 188, 315-323.	2.5	147
59	The Martian hydrologic system: Multiple recharge centers at large volcanic provinces and the contribution of snowmelt to outflow channel activity. Planetary and Space Science, 2007, 55, 315-332.	1.7	38
60	Modification of the dichotomy boundary on Mars by Amazonian mid-latitude regional glaciation. Geophysical Research Letters, 2006, 33, .	4.0	109
61	Alba Patera, Mars: Topography, structure, and evolution of a unique late Hesperianâ€“early Amazonian shield volcano. Journal of Geophysical Research, 2006, 111, .	3.3	37
62	Headward growth of chasmata by volatile outbursts, collapse, and drainage: Evidence from Ganges chaos, Mars. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	27
63	Formation of a terraced fan deposit in Coprates Catena, Mars. Icarus, 2006, 184, 436-451.	2.5	33
64	A simplified two-component model for the lateral growth of pahoehoe lobes. Journal of Volcanology and Geothermal Research, 2006, 157, 331-342.	2.1	5
65	Millochau crater, Mars: Infilling and erosion of an ancient highland impact crater. Icarus, 2005, 175, 335-359.	2.5	18
66	The role of arcuate ridges and gullies in the degradation of craters in the Newton Basin region of Mars. Icarus, 2005, 178, 465-486.	2.5	68
67	Surface characteristics and degradational history of debris aprons in the Tempe Terra/Mareotis fossae region of Mars. Icarus, 2005, 179, 24-42.	2.5	51
68	Mantle and gully associations along the walls of Dao and Harmakhis Valles, Mars. Geophysical Research Letters, 2005, 32, .	4.0	21
69	Mapping the structure and depth of lava tubes using ground penetrating radar. Geophysical Research Letters, 2005, 32, .	4.0	25
70	Styles and timing of volatile-driven activity in the eastern Hellas region of Mars. Journal of Geophysical Research, 2005, 110, .	3.3	56
71	Surface unit characterization of the Mauna Ulu flow field, Kilauea Volcano, Hawaiâ€²i, using integrated field and remote sensing analyses. Journal of Volcanology and Geothermal Research, 2004, 135, 169-193.	2.1	30
72	The unique radar properties of silicic lava domes. Journal of Geophysical Research, 2004, 109, .	3.3	28

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73	Morphologic and topographic analyses of debris aprons in the eastern Hellas region, Mars. Icarus, 2003, 163, 46-65.	2.5	154
74	Generation of recent massive water floods at Cerberus Fossae, Mars by dike emplacement, cryospheric cracking, and confined aquifer groundwater release. Geophysical Research Letters, 2003, 30, .	4.0	143
75	Heat transfer and melting in subglacial basaltic volcanic eruptions: implications for volcanic deposit morphology and meltwater volumes. Geological Society Special Publication, 2002, 202, 5-26.	1.3	40
76	Mars: a review and synthesis of general environments and geological settings of magma-H2O interactions. Geological Society Special Publication, 2002, 202, 27-57.	1.3	39
77	Morphology, stratigraphy, and surface roughness properties of Venusian lava flow fields. Journal of Geophysical Research, 2002, 107, 9-1.	3.3	24
78	Northern lowlands of Mars: Evidence for widespread volcanic flooding and tectonic deformation in the Hesperian Period. Journal of Geophysical Research, 2002, 107, 3-1.	3.3	238
79	Extension and uplift at Alba Patera, Mars: Insights from MOLA observations and loading models. Journal of Geophysical Research, 2001, 106, 23769-23809.	3.3	27
80	Mars Orbiter Laser Altimeter: Experiment summary after the first year of global mapping of Mars. Journal of Geophysical Research, 2001, 106, 23689-23722.	3.3	1,344
81	Color and Morphology of Lava Flows on Io. Icarus, 2000, 148, 407-418.	2.5	0
82	Kilometer-scale roughness of Mars: Results from MOLA data analysis. Journal of Geophysical Research, 2000, 105, 26695-26711.	3.3	313
83	Pahoehoe toe dimensions, morphology, and branching relationships at Mauna Ulu, Kilauea Volcano, Hawai'i. Bulletin of Volcanology, 1999, 61, 288-305.	3.0	39
84	Downflow width behavior of Martian and terrestrial lava flows. Journal of Geophysical Research, 1999, 104, 8473-8488.	3.3	18
85	Block size distributions on silicic lava flow surfaces: Implications for emplacement conditions. Bulletin of the Geological Society of America, 1998, 110, 1258-1267.	3.3	50
86	Calderas on Mars: characteristics, structure, and associated flank deformation. Geological Society Special Publication, 1996, 110, 307-348.	1.3	92
87	Mars: Review and analysis of volcanic eruption theory and relationships to observed landforms. Reviews of Geophysics, 1994, 32, 221.	23.0	313
88	Volcanic geology of Hadriaca Patera and the eastern Hellas region of Mars. Journal of Geophysical Research, 1993, 98, 3431-3451.	3.3	136
89	Geologic evolution of the east rim of the Hellas basin Mars. Icarus, 1992, 100, 1-25.	2.5	106
90	Observations of industrial sulfur flows: Implications for Io. Icarus, 1990, 84, 374-402.	2.5	21

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91	Volcanic geology of Tyrrhena Patera, Mars. Journal of Geophysical Research, 1990, 95, 7133-7149.	3.3	152
92	Spectral properties of plagioclase and pyroxene mixtures and the interpretation of lunar soil spectra. Icarus, 1987, 72, 492-506.	2.5	111
93	Planetology: Sulphur and volcanism on Io. Nature, 1986, 322, 593-594.	27.8	1
94	Mars: Thickness of the lithosphere from the tectonic response to volcanic loads. Reviews of Geophysics, 1985, 23, 61-92.	23.0	115
95	Lunar floorâ€fractured craters: Evidence for viscous relaxation of crater topography. Journal of Geophysical Research, 1981, 86, 9537-9552.	3.3	55