Simone Marchi

List of Publications by Year
in descending order

133 papers	8,416 citations	36303 51 h-index	45317 90 g-index
143 all docs	143 docs citations	143 times ranked	3792 citing authors

#	Article	IF	Citations
1	Protoplanet Vesta and HED Meteorites. , 2022, , 41-52.		2
2	Carbon and Organic Matter on Ceres. , 2022, , 121-133.		0
3	Geomorphology of Ceres. , 2022, , 143-158.		0
4	Origin and Dynamical Evolution of the Asteroid Belt. , 2022, , 227-249.		9
5	The Psyche Topography and Geomorphology Investigation. Space Science Reviews, 2022, 218, 1.	8.1	4
6	Ceresâ€™ Surface Composition. , 2022, , 105-120.		0
7	Collisional Evolution of the Main Belt as Recorded by Vesta. , 2022, , 250-261.		1
8	Ammonia on Ceres. , 2022, , 134-142.		0
9	Geophysics of Vesta and Ceres. , 2022, , 173-196.		0
10	Formation of Main Belt Asteroids. , 2022, , 199-211.		3
11	The Surface Composition of Vesta. , 2022, , 81-104.		0
12	Remote Observations of the Main Belt. , 2022, , 3-25.		0
13	Geomorphology of Vesta. , 2022, , 67-80.		0
14	Isotopic Constraints on the Formation of the Main Belt. , 2022, , 212-226.		1
15	Ceresâ€™ Internal Evolution. , 2022, , 159-172.		0
16	Exploring Vesta and Ceres. , 2022, , 26-38.		0
17	A young age of formation of Rheasilvia basin on Vesta from floor deformation patterns and crater counts. Meteoritics and Planetary Science, 2022, 57, 22-47.	1.6	6
18	Distinguishing the Origin of Asteroid (16) Psyche. Space Science Reviews, 2022, 218, 17.	8.1	13

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19	Determining the Relative Cratering Ages of Regions of Psycheâ€™s Surface. Space Science Reviews, 2022, 218, 1.	8.1	4
20	Ceresâ€™ Broadâ€Scale Surface Geomorphology Largely Due To Asymmetric Internal Convection. AGU Advances, 2022, 3, .	5.4	2
21	Impact melting upon basin formation on early Mars. Icarus, 2021, 357, 114128.	2.5	16
22	A re-assessment of the Kuiper belt size distribution for sub-kilometer objects, revealing collisional equilibrium at small sizes. Icarus, 2021, 356, 114256.	2.5	28
23	Suggestion that recent (â‰ 3ÂGa) flux of kilometer and larger impactors in the Earth-Moon system has not been constant. Icarus, 2021, 355, 114110.	2.5	7
24	NASA's Lucy Mission to the Trojan Asteroids. , 2021, , .		4
25	A New Martian Crater Chronology: Implications for Jezero Crater. Astronomical Journal, 2021, 161, 187.	4.7	12
26	Compositional control on impact crater formation on mid-sized planetary bodies: Dawn at Ceres and Vesta, Cassini at Saturn. Icarus, 2021, 359, 114343.	2.5	14
27	Replenishment of Nearâ€Surface Water Ice by Impacts Into Ceres' Volatileâ€Rich Crust: Observations by Dawn's Gamma Ray and Neutron Detector. Geophysical Research Letters, 2021, 48, e2021GL094223.	4.0	2
28	Lucy Mission to the Trojan Asteroids: Science Goals. Planetary Science Journal, 2021, 2, 171.	3.6	54
29	The Orbit and Density of the Jupiter Trojan Satellite System Eurybatesâ€“Queta. Planetary Science Journal, 2021, 2, 170.	3.6	10
30	Lucy Mission to the Trojan Asteroids: Instrumentation and Encounter Concept of Operations. Planetary Science Journal, 2021, 2, 172.	3.6	21
31	Dark primitive asteroids account for a large share of K/Pg-scale impacts on the Earth. Icarus, 2021, 368, 114621.	2.5	9
32	Ceres and Pluto. , 2021, , 150-159.		0
33	Delayed and variable late Archaean atmospheric oxidation due to high collision rates on Earth. Nature Geoscience, 2021, 14, 827-831.	12.9	15
34	Vestaâ€™s many ties to Earth. Nature Astronomy, 2021, 5, 1214-1215.	10.1	1
35	Hypervelocity Impact Experiments in Ironâ€Nickel Ingots and Iron Meteorites: Implications for the NASA Psyche Mission. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE005927.	3.6	18
36	Impact heat driven volatile redistribution at Occator crater on Ceres as a comparative planetary process. Nature Communications, 2020, 11, 3679.	12.8	19

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37	Impact-driven mobilization of deep crustal brines on dwarf planet Ceres. Nature Astronomy, 2020, 4, 741-747.	10.1	50
38	An Integrated Geologic Map of the Rembrandt Basin, on Mercury, as a Starting Point for Stratigraphic Analysis. Remote Sensing, 2020, 12, 3213.	4.0	14
39	Interpreting the Cratering Histories of Bennu, Ryugu, and Other Spacecraft-explored Asteroids. Astronomical Journal, 2020, 160, 14.	4.7	34
40	The Chaotic Terrains of Mercury Reveal a History of Planetary Volatile Retention and Loss in the Innermost Solar System. Scientific Reports, 2020, 10, 4737.	3.3	5
41	SIMBIO-SYS: Scientific Cameras and Spectrometer for the BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	47
42	Observations, Meteorites, and Models: A Preflight Assessment of the Composition and Formation of (16) Psyche. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006296.	3.6	61
43	A compositionally heterogeneous martian mantle due to late accretion. Science Advances, 2020, 6, eaay2338.	10.3	24
44	An endogenic origin of cerean organics. Earth and Planetary Science Letters, 2020, 534, 116069.	4.4	12
45	Detection of a Satellite of the Trojan Asteroid (3548) Eurybatesâ€”A Lucy Mission Target. Planetary Science Journal, 2020, 1, 44.	3.6	13
46	Convex Shape and Rotation Model of Lucy Target (11351) Leucus from Lightcurves and Occultations. Planetary Science Journal, 2020, 1, 73.	3.6	11
47	Elemental composition and mineralogy of Vesta and Ceres: Distribution and origins of hydrogen-bearing species. Icarus, 2019, 318, 42-55.	2.5	34
48	Ceres Crater Degradation Inferred From Concentric Fracturing. Journal of Geophysical Research E: Planets, 2019, 124, 1188-1203.	3.6	15
49	Laboratory impact experiments with decimeter-to meter-scale targets to measure momentum enhancement. Planetary and Space Science, 2019, 178, 104694.	1.7	8
50	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
51	Water Vapor Contribution to Ceres' Exosphere From Observed Surface Ice and Postulated Iceâ€Exposing Impacts. Journal of Geophysical Research E: Planets, 2019, 124, 61-75.	3.6	20
52	The various ages of Occator crater, Ceres: Results of a comprehensive synthesis approach. Icarus, 2019, 320, 60-82.	2.5	38
53	An aqueously altered carbon-rich Ceres. Nature Astronomy, 2019, 3, 140-145.	10.1	62
54	Post-impact thermal structure and cooling timescales of Occator crater on asteroid 1 Ceres. Icarus, 2019, 320, 110-118.	2.5	44

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55	Morphological Indicators of a Mascon Beneath Ceres's Largest Crater, Kerwan. Geophysical Research Letters, 2018, 45, 1297-1304.	4.0	15
56	The timeline of the lunar bombardment: Revisited. Icarus, 2018, 305, 262-276.	2.5	186
57	Nature, formation, and distribution of carbonates on Ceres. Science Advances, 2018, 4, e1701645.	10.3	83
58	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
59	Heterogeneous delivery of silicate and metal to the Earth by large planetesimals. Nature Geoscience, 2018, 11, 77-81.	12.9	67
60	Ceresâ€™ Ezinu quadrangle: a heavily cratered region with evidence for localized subsurface water ice and the context of Occator crater. Icarus, 2018, 316, 46-62.	2.5	21
61	The geology of the Kerwan quadrangle of dwarf planet Ceres: Investigating Ceresâ€™ oldest, largest impact basin. Icarus, 2018, 316, 99-113.	2.5	28
62	Impact Cratering of Mercury. , 2018, , 217-248.		10
63	Tensile strength of 67P/Churyumovâ€“Gerasimenko nucleus material from overhangs. Astronomy and Astrophysics, 2018, 611, A33.	5.1	40
64	Late movement of basin-edge lobate scarps on Mercury. Icarus, 2017, 288, 226-234.	2.5	16
65	Localized aliphatic organic material on the surface of Ceres. Science, 2017, 355, 719-722.	12.6	152
66	Geomorphological evidence for ground ice on dwarf planet Ceres. Nature Geoscience, 2017, 10, 338-343.	12.9	83
67	Surface changes on comet 67P/Churyumov-Gerasimenko suggest a more active past. Science, 2017, 355, 1392-1395.	12.6	63
68	Extensive water ice within Ceresâ€™ aqueously altered regolith: Evidence from nuclear spectroscopy. Science, 2017, 355, 55-59.	12.6	169
69	Evidence for the Interior Evolution of Ceres from Geologic Analysis of Fractures. Geophysical Research Letters, 2017, 44, 9564-9572.	4.0	31
70	Impact-driven subduction on the Hadean Earth. Nature Geoscience, 2017, 10, 793-797.	12.9	107
71	The interior structure of Ceres as revealed by surface topography. Earth and Planetary Science Letters, 2017, 476, 153-164.	4.4	117
72	Pitted terrains on (1) Ceres and implications for shallow subsurface volatile distribution. Geophysical Research Letters, 2017, 44, 6570-6578.	4.0	48

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73	The missing large impact craters on Ceres. Nature Communications, 2016, 7, 12257.	12.8	84
74	The global shape, density and rotation of Comet 67P/Churyumov-Gerasimenko from preperihelion Rosetta/OSIRIS observations. Icarus, 2016, 277, 257-278.	2.5	252
75	Global variations in regolith properties on asteroid Vesta from Dawn's lowâ€altitude mapping orbit. Meteoritics and Planetary Science, 2016, 51, 2366-2386.	1.6	11
76	Dawn arrives at Ceres: Exploration of a small, volatile-rich world. Science, 2016, 353, 1008-1010.	12.6	178
77	Distribution of phyllosilicates on the surface of Ceres. Science, 2016, 353, .	12.6	159
78	The geomorphology of Ceres. Science, 2016, 353, .	12.6	109
79	Cratering on Ceres: Implications for its crust and evolution. Science, 2016, 353, .	12.6	135
80	Massive impact-induced release of carbon and sulfur gases in the early Earth's atmosphere. Earth and Planetary Science Letters, 2016, 449, 96-104.	4.4	12
81	Fission and reconfiguration of bilobate comets as revealed by 67P/Churyumovâ€“Gerasimenko. Nature, 2016, 534, 352-355.	27.8	68
82	Bright carbonate deposits as evidence of aqueous alteration on (1) Ceres. Nature, 2016, 536, 54-57.	27.8	240
83	Composition and structure of the shallow subsurface of Ceres revealed by craterÂmorphology. Nature Geoscience, 2016, 9, 538-542.	12.9	118
84	Regional surface morphology of comet 67P/Churyumov-Gerasimenko from Rosetta/OSIRIS images. Astronomy and Astrophysics, 2015, 583, A26.	5.1	153
85	Geomorphology of the Imhotep region on comet 67P/Churyumov-Gerasimenko from OSIRIS observations. Astronomy and Astrophysics, 2015, 583, A35.	5.1	59
86	Size-frequency distribution of boulders â‰¥7 m on comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A37.	5.1	108
87	Comet 67P/Churyumov-Gerasimenko: Constraints on its origin from OSIRIS observations. Astronomy and Astrophysics, 2015, 583, A44.	5.1	53
88	Temporal morphological changes in the Imhotep region of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A36.	5.1	60
89	Boulders on asteroid Toutatis as observed by Changâ€™e-2. Scientific Reports, 2015, 5, 16029.	3.3	28
90	Fractures on comet 67P/Churyumovâ€Gerasimenko observed by Rosetta/OSIRIS. Geophysical Research Letters, 2015, 42, 5170-5178.	4.0	71

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91	Ammoniated phyllosilicates with a likely outer Solar System origin on (1) Ceres. Nature, 2015, 528, 241-244.	27.8	276
92	On the nucleus structure and activity of comet 67P/Churyumov-Gerasimenko. Science, 2015, 347, aaa1044.	12.6	366
93	The morphological diversity of comet 67P/Churyumov-Gerasimenko. Science, 2015, 347, aaa0440.	12.6	259
94	Age dating of an extensive thrust system on Mercury: implications for the planet's thermal evolution. Geological Society Special Publication, 2015, 401, 291-311.	1.3	9
95	Mineralogy of Marcia, the youngest large crater of Vesta: Character and distribution of pyroxenes and hydrated material. Icarus, 2015, 248, 392-406.	2.5	9
96	Age relationships of the Rembrandt basin and Enterprise Rupes, Mercury. Geological Society Special Publication, 2015, 401, 159-172.	1.3	14
97	Thermal fatigue as the origin of regolith on small asteroids. Nature, 2014, 508, 233-236.	27.8	280
98	The chronostratigraphy of protoplanet Vesta. Icarus, 2014, 244, 158-165.	2.5	26
99	Widespread mixing and burial of Earthâ€™s Hadean crust by asteroid impacts. Nature, 2014, 511, 578-582.	27.8	187
100	Crater depth-to-diameter distribution and surface properties of (4) vesta. Planetary and Space Science, 2014, 103, 57-65.	1.7	41
101	The geology of the Marcia quadrangle of asteroid Vesta: Assessing the effects of large, young craters. Icarus, 2014, 244, 74-88.	2.5	36
102	Small crater populations on Vesta. Planetary and Space Science, 2014, 103, 96-103.	1.7	54
103	Constraining the cratering chronology of Vesta. Planetary and Space Science, 2014, 103, 131-142.	1.7	41
104	Ages of large lunar impact craters and implications for bombardment during the Moonâ€™s middle age. Icarus, 2013, 225, 325-341.	2.5	50
105	High-velocity collisions from the lunar cataclysm recorded in asteroidal meteorites. Nature Geoscience, 2013, 6, 303-307.	12.9	113
106	Dawn completes its mission at 4 Vesta. Meteoritics and Planetary Science, 2013, 48, 2076-2089.	1.6	54
107	Global resurfacing of Mercury 4.0â€“4.1 billion years ago by heavy bombardment and volcanism. Nature, 2013, 499, 59-61.	27.8	154
108	Vestan lithologies mapped by the visual and infrared spectrometer on Dawn. Meteoritics and Planetary Science, 2013, 48, 2185-2198.	1.6	75

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109	Vesta's mineralogical composition as revealed by the visible and infrared spectrometer on Dawn. Meteoritics and Planetary Science, 2013, 48, 2166-2184.	1.6	87
110	Olivine in an unexpected location on Vestaâ€™s surface. Nature, 2013, 504, 122-125.	27.8	82
111	Vesta, vestoids, and the HED meteorites: Interconnections and differences based on Dawn Framing Camera observations. Journal of Geophysical Research E: Planets, 2013, 118, 1991-2003.	3.6	11
112	Antipodal terrains created by the Rheasilvia basin forming impact on asteroid 4 Vesta. Journal of Geophysical Research E: Planets, 2013, 118, 1821-1834.	3.6	22
113	Distinctive space weathering on Vesta from regolith mixing processes. Nature, 2012, 491, 79-82.	27.8	120
114	Pitted Terrain on Vesta and Implications for the Presence of Volatiles. Science, 2012, 338, 246-249.	12.6	91
115	The onset of the lunar cataclysm as recorded in its ancient crater populations. Earth and Planetary Science Letters, 2012, 325-326, 27-38.	4.4	103
116	A sawtooth-like timeline for the first billion years of lunar bombardment. Earth and Planetary Science Letters, 2012, 355-356, 144-151.	4.4	217
117	DETECTION OF WIDESPREAD HYDRATED MATERIALS ON VESTA BY THE VIR IMAGING SPECTROMETER ON BOARD THE DAWN MISSION. Astrophysical Journal Letters, 2012, 758, L36.	8.3	117
118	Vestaâ€™s Shape and Morphology. Science, 2012, 336, 687-690.	12.6	222
119	The Geologically Recent Giant Impact Basins at Vestaâ€™s South Pole. Science, 2012, 336, 694-697.	12.6	194
120	Spectroscopic Characterization of Mineralogy and Its Diversity Across Vesta. Science, 2012, 336, 697-700.	12.6	240
121	The Violent Collisional History of Asteroid 4 Vesta. Science, 2012, 336, 690-694.	12.6	209
122	The geomorphology of (21) Lutetia: Results from the OSIRIS imaging system onboard ESA's Rosetta spacecraft. Planetary and Space Science, 2012, 66, 96-124.	1.7	58
123	The cratering history of asteroid (21) Lutetia. Planetary and Space Science, 2012, 66, 87-95.	1.7	43
124	Boulders on Lutetia. Planetary and Space Science, 2012, 66, 71-78.	1.7	52
125	Geological map and stratigraphy of asteroid 21 Lutetia. Planetary and Space Science, 2012, 66, 125-136.	1.7	42
126	Images of Asteroid 21 Lutetia: A Remnant Planetesimal from the Early Solar System. Science, 2011, 334, 487-490.	12.6	179

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127	Spectral and mineralogical characterization of inner main-belt V-type asteroids. Astronomy and Astrophysics, 2011, 533, A77.	5.1	38
128	The effects of the target material properties and layering on the crater chronology: The case of Raditladi and Rachmaninoff basins on Mercury. Planetary and Space Science, 2011, 59, 1968-1980.	1.7	51
129	The cratering history of asteroid (2867) Steins. Planetary and Space Science, 2010, 58, 1116-1123.	1.7	46
130	A NEW CHRONOLOGY FOR THE MOON AND MERCURY. Astronomical Journal, 2009, 137, 4936-4948.	4.7	152
131	Mercury's geochronology revised by applying Model Production Function to Mariner 10 data: Geological implications. Geophysical Research Letters, 2009, 36, .	4.0	23
132	Lucy in the sky with Trojan asteroids. Nature Astronomy, 0, , .	10.1	1
133	Spectroscopic study of Ceres' collisional family candidates. Astronomy and Astrophysics, 0, , .	5.1	2