Julie Castillo-Rogez

List of Publications by Year
in descending order

130 papers	5,191 citations	81900 39 h-index	98798 67 g-index
134 all docs	134 docs citations	134 times ranked	2788 citing authors

#	Article	IF	Citations
1	Bright carbonate deposits as evidence of aqueous alteration on (1) Ceres. Nature, 2016, 536, 54-57.	27.8	240
2	The NASA Roadmap to Ocean Worlds. Astrobiology, 2019, 19, 1-27.	3.0	209
3	Ceresâ€™ evolution and present state constrained by shape data. Icarus, 2010, 205, 443-459.	2.5	185
4	Dawn arrives at Ceres: Exploration of a small, volatile-rich world. Science, 2016, 353, 1008-1010.	12.6	178
5	A partially differentiated interior for (1) Ceres deduced from its gravity field and shape. Nature, 2016, 537, 515-517.	27.8	169
6	Extensive water ice within Ceresâ€™ aqueously altered regolith: Evidence from nuclear spectroscopy. Science, 2017, 355, 55-59.	12.6	169
7	Cryovolcanism on Ceres. Science, 2016, 353, .	12.6	164
8	Distribution of phyllosilicates on the surface of Ceres. Science, 2016, 353, .	12.6	159
9	Cratering on Ceres: Implications for its crust and evolution. Science, 2016, 353, .	12.6	135
10	Iapetus' geophysics: Rotation rate, shape, and equatorial ridge. Icarus, 2007, 190, 179-202.	2.5	128
11	Accretion of Saturnâ€™s mid-sized moons during the viscous spreading of young massive rings: Solving the paradox of silicate-poor rings versus silicate-rich moons. Icarus, 2011, 216, 535-550.	2.5	123
12	Composition and structure of the shallow subsurface of Ceres revealed by craterÂmorphology. Nature Geoscience, 2016, 9, 538-542.	12.9	118
13	Constraints on Ceres' Internal Structure and Evolution From Its Shape and Gravity Measured by the Dawn Spacecraft. Journal of Geophysical Research E: Planets, 2017, 122, 2267-2293.	3.6	117
14	The interior structure of Ceres as revealed by surface topography. Earth and Planetary Science Letters, 2017, 476, 153-164.	4.4	117
15	26Al decay: Heat production and a revised age for Iapetus. Icarus, 2009, 204, 658-662.	2.5	92
16	Small satellites for space science. Advances in Space Research, 2019, 64, 1466-1517.	2.6	85
17	Geomorphological evidence for ground ice on dwarf planet Ceres. Nature Geoscience, 2017, 10, 338-343.	12.9	83
18	Nature, formation, and distribution of carbonates on Ceres. Science Advances, 2018, 4, e1701645.	10.3	83

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19	Evolution of Titan's rocky core constrained by Cassini observations. Geophysical Research Letters, 2010, 37, .	4.0	82
20	The tidal history of Iapetus: Spin dynamics in the light of a refined dissipation model. Journal of Geophysical Research, 2011, 116, .	3.3	82
21	Aqueous geochemistry in icy world interiors: Equilibrium fluid, rock, and gas compositions, and fate of antifreezes and radionuclides. Geochimica Et Cosmochimica Acta, 2017, 212, 324-371.	3.9	74
22	Insights into Ceres's evolution from surface composition. Meteoritics and Planetary Science, 2018, 53, 1820-1843.	1.6	73
23	Carbonaceous chondrites as analogs for the composition and alteration of Ceres. Meteoritics and Planetary Science, 2018, 53, 1793-1804.	1.6	65
24	An aqueously altered carbon-rich Ceres. Nature Astronomy, 2019, 3, 140-145.	10.1	62
25	The science case for an orbital mission to Uranus: Exploring the origins and evolution of ice giant planets. Planetary and Space Science, 2014, 104, 122-140.	1.7	56
26	DIFFERENT ORIGINS OR DIFFERENT EVOLUTIONS? DECODING THE SPECTRAL DIVERSITY AMONG C-TYPE ASTEROIDS. Astronomical Journal, 2017, 153, 72.	4.7	55
27	A Possible Brine Reservoir Beneath Occator Crater: Thermal and Compositional Evolution and Formation of the Cerealia Dome and Vinalia Faculae. Icarus, 2019, 320, 119-135.	2.5	55
28	THE PUZZLING MUTUAL ORBIT OF THE BINARY TROJAN ASTEROID (624) HEKTOR. Astrophysical Journal Letters, 2014, 783, L37.	8.3	54
29	Geophysical evolution of Saturnâ€™s satellite Phoebe, a large planetesimal in the outer Solar System. Icarus, 2012, 219, 86-109.	2.5	53
30	Ceres: Its Origin, Evolution and Structure and Dawnâ€™s Potential Contribution. Space Science Reviews, 2011, 163, 63-76.	8.1	52
31	Impact-driven mobilization of deep crustal brines on dwarf planet Ceres. Nature Astronomy, 2020, 4, 741-747.	10.1	50
32	VLT/SPHERE imaging survey of the largest main-belt asteroids: Final results and synthesis. Astronomy and Astrophysics, 2021, 654, A56.	5.1	50
33	Ceres â€“ Neither a porous nor salty ball. Icarus, 2011, 215, 599-602.	2.5	49
34	Enceladus: A hypothesis for bringing both heat and chemicals to the surface. Icarus, 2012, 221, 53-62.	2.5	46
35	Conditions for the Longâ€Term Preservation of a Deep Brine Reservoir in Ceres. Geophysical Research Letters, 2019, 46, 1963-1972.	4.0	46
36	Core cracking and hydrothermal circulation can profoundly affect Ceres' geophysical evolution. Journal of Geophysical Research E: Planets, 2015, 120, 123-154.	3.6	44

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37	Water and Volatiles in the Outer Solar System. Space Science Reviews, 2017, 212, 835-875.	8.1	44
38	Post-impact thermal structure and cooling timescales of Occator crater on asteroid 1 Ceres. Icarus, 2019, 320, 110-118.	2.5	44
39	Ceres: Astrobiological Target and Possible Ocean World. Astrobiology, 2020, 20, 269-291.	3.0	43
40	Geomorphological evidence for transient water flow on Vesta. Earth and Planetary Science Letters, 2015, 411, 151-163.	4.4	42
41	SURFACE ALBEDO AND SPECTRAL VARIABILITY OF CERES. Astrophysical Journal Letters, 2016, 817, L22.	8.3	42
42	Slurry extrusion on Ceres from a convective mud-bearing mantle. Nature Geoscience, 2019, 12, 505-509.	12.9	42
43	The varied sources of faculae-forming brines in Ceresâ€™ Occator crater emplaced via hydrothermal brine effusion. Nature Communications, 2020, 11, 3680.	12.8	41
44	Conditions for Sublimating Water Ice to Supply Ceres' Exosphere. Journal of Geophysical Research E: Planets, 2017, 122, 1984-1995.	3.6	40
45	Geophysical evolution of the Themis family parent body. Geophysical Research Letters, 2010, 37, .	4.0	39
46	A basin-free spherical shape as an outcome of a giant impact on asteroid Hygiea. Nature Astronomy, 2020, 4, 136-141.	10.1	38
47	Geologic constraints on the origin of red organicâ€rich material on Ceres. Meteoritics and Planetary Science, 2018, 53, 1983-1998.	1.6	34
48	COMPOSITIONS AND ORIGINS OF OUTER PLANET SYSTEMS: INSIGHTS FROM THE ROCHE CRITICAL DENSITY. Astrophysical Journal Letters, 2013, 765, L28.	8.3	33
49	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
50	A HOT GAP AROUND JUPITER'S ORBIT IN THE SOLAR NEBULA. Astrophysical Journal, 2012, 748, 92.	4.5	32
51	Thermal Evolution of the Impactâ€Induced Cryomagma Chamber Beneath Occator Crater on Ceres. Geophysical Research Letters, 2019, 46, 1213-1221.	4.0	32
52	Recent cryovolcanic activity at Occator crater on Ceres. Nature Astronomy, 2020, 4, 794-801.	10.1	32
53	Evidence for the Interior Evolution of Ceres from Geologic Analysis of Fractures. Geophysical Research Letters, 2017, 44, 9564-9572.	4.0	31
54	Ceres: Its Origin, Evolution and Structure and Dawnâ€™s Potential Contribution. , 2011, , 63-76.		31

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55	Evidence of non-uniform crust of Ceres from Dawnâ€™s high-resolution gravity data. Nature Astronomy, 2020, 4, 748-755.	10.1	30
56	The impact crater at the origin of the Julia family detected with VLT/SPHERE?. Astronomy and Astrophysics, 2018, 618, A154.	5.1	29
57	The central pit and dome at Cerealia Facula bright deposit and floor deposits in Occator crater, Ceres: Morphology, comparisons and formation. Icarus, 2019, 320, 159-187.	2.5	28
58	Itâ€™s Complicated: A Big Data Approach to Exploring Planetesimal Evolution in the Presence of Jovian Planets. Astronomical Journal, 2018, 156, 232.	4.7	26
59	The violent collisional history of aqueously evolved (2) Pallas. Nature Astronomy, 2020, 4, 569-576.	10.1	26
60	Phobos interior from librations determination using Doppler and star tracker measurements. Planetary and Space Science, 2013, 85, 106-122.	1.7	25
61	Ceresâ€™ Occator crater and its faculae explored through geologic mapping. Icarus, 2019, 320, 7-23.	2.5	25
62	Tectonic analysis of fracturing associated with occator crater. Icarus, 2019, 320, 49-59.	2.5	21
63	Spectrophotometric modeling and mapping of Ceres. Icarus, 2019, 322, 144-167.	2.5	21
64	Ceresâ€™s internal evolution: The view after Dawn. Meteoritics and Planetary Science, 2018, 53, 1778-1792.	1.6	20
65	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
66	Internal structure of Rhea. Journal of Geophysical Research, 2006, 111, .	3.3	19
67	The Thermal Evolution and Internal Structure of Saturn's Mid-Sized Icy Satellites. , 2009, , 577-612.		19
68	Analytical description of physical librations of saturnian coorbital satellites Janus and Epimetheus. Icarus, 2011, 211, 758-769.	2.5	19
69	The Putative Cerean Exosphere. Astrophysical Journal, 2017, 850, 85.	4.5	19
70	Ceres internal structure from geophysical constraints. Meteoritics and Planetary Science, 2018, 53, 1999-2007.	1.6	19
71	Impact heat driven volatile redistribution at Occator crater on Ceres as a comparative planetary process. Nature Communications, 2020, 11, 3679.	12.8	19
72	The Science Case for Spacecraft Exploration of the Uranian Satellites: Candidate Ocean Worlds in an Ice Giant System. Planetary Science Journal, 2021, 2, 120.	3.6	19

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73	Searching for Subsurface Oceans on the Moons of Uranus Using Magnetic Induction. Geophysical Research Letters, 2021, 48, e2021GL094758.	4.0	19
74	Third-order development of shape, gravity, and moment of inertia for highly flattened celestial bodies. Application to Ceres. Astronomy and Astrophysics, 2015, 584, A127.	5.1	18
75	Synthesis of the special issue: The formation and evolution of Ceresâ€™ Occator crater. Icarus, 2019, 320, 213-225.	2.5	17
76	Ceresâ€™ partial differentiation: undifferentiated crust mixing with a water-rich mantle. Astronomy and Astrophysics, 2020, 633, A117.	5.1	17
77	Bridge to the stars: A mission concept to an interstellar object. Planetary and Space Science, 2021, 197, 105137.	1.7	17
78	Dome formation on Ceres by solid-state flow analogous to terrestrial salt tectonics. Nature Geoscience, 2019, 12, 797-801.	12.9	16
79	Morphological Indicators of a Mascon Beneath Ceres's Largest Crater, Kerwan. Geophysical Research Letters, 2018, 45, 1297-1304.	4.0	15
80	Post-impact cryo-hydrologic formation of small mounds and hills in Ceresâ€™s Occator crater. Nature Geoscience, 2020, 13, 605-610.	12.9	15
81	Triton: Fascinating Moon, Likely Ocean World, Compelling Destination!. Planetary Science Journal, 2021, 2, 137.	3.6	15
82	Atmospheric control of the cooling rate of impact melts and cryolavas on Titanâ€™s surface. Icarus, 2010, 208, 887-895.	2.5	14
83	Constraining Ceresâ€™ interior from its rotational motion. Astronomy and Astrophysics, 2011, 535, A43.	5.1	14
84	Dynamical delivery of volatiles to the outer main belt. Icarus, 2014, 232, 13-21.	2.5	14
85	Relict Ocean Worlds: Ceres. Space Science Reviews, 2020, 216, 1.	8.1	14
86	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
87	A Recipe for the Geophysical Exploration of Enceladus. Planetary Science Journal, 2021, 2, 157.	3.6	14
88	Equilibrium Shapes of Large Trans-Neptunian Objects. Astrophysical Journal Letters, 2017, 850, L9.	8.3	13
89	The shape of (7) Iris as evidence of an ancient large impact?. Astronomy and Astrophysics, 2019, 624, A121.	5.1	12
90	Geophysical evidence that Saturnâ€™s Moon Phoebe originated from a C-type asteroid reservoir. Monthly Notices of the Royal Astronomical Society, 2019, 486, 538-543.	4.4	12

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91	Organic Material on Ceres: Insights from Visible and Infrared Space Observations. Life, 2021, 11, 9.	2.4	12
92	Wavelet transform: A tool for the interpretation of upper mantle converted phases at high frequency. Geophysical Research Letters, 2001, 28, 4327-4330.	4.0	11
93	Water, heat, bombardment: The evolution and current state of (2) Pallas. Icarus, 2012, 218, 478-488.	2.5	11
94	Origin and Evolution of Volatile-rich Asteroids. , 2017, , 92-114.		11
95	A space-based decametric wavelength radio telescope concept. Experimental Astronomy, 2018, 46, 241-284.	3.7	10
96	Advanced Pointing Imaging Camera (APIC) for planetary science and mission opportunities. Planetary and Space Science, 2020, 194, 105095.	1.7	10
97	Enhanced flyby science with onboard computer vision: Tracking and surface feature detection at small bodies. Earth and Space Science, 2015, 2, 417-434.	2.6	9
98	Compositional variability on the surface of 1 Ceres revealed through GRaND measurements of highâ€energy gamma rays. Meteoritics and Planetary Science, 2018, 53, 1805-1819.	1.6	9
99	Search for water outgassing of (1) Ceres near perihelion. Astronomy and Astrophysics, 2019, 628, A22.	5.1	9
100	Tritonâ€™s Variable Interaction With Neptuneâ€™s Magnetospheric Plasma. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029740.	2.4	9
101	Singleâ€and Multiâ€Pass Magnetometric Subsurface Ocean Detection and Characterization in Icy Worlds Using Principal Component Analysis (PCA): Application to Triton. Earth and Space Science, 2022, 9, .	2.6	9
102	Concepts for the Future Exploration of Dwarf Planet Ceresâ€™ Habitability. Planetary Science Journal, 2022, 3, 41.	3.6	9
103	Porosity-filling Metamorphic Brines Explain Ceresâ€™s Low Mantle Density. Planetary Science Journal, 2022, 3, 21.	3.6	8
104	Small Habitable Worlds. , 2012, , 201-228.		7
105	Normal Faults on Ceres: Insights Into the Mechanical Properties and Thermal History of Nar Sulcus. Geophysical Research Letters, 2019, 46, 80-88.	4.0	7
106	Introduction to the special issue: The formation and evolution of Ceresâ€™ Occator crater. Icarus, 2019, 320, 1-6.	2.5	7
107	Feasibility of characterizing subsurface brines on Ceres by electromagnetic sounding. Icarus, 2021, 362, 114424.	2.5	7
108	The geology of the Nawish quadrangle of Ceres: The rim of an ancient basin. Icarus, 2018, 316, 114-127.	2.5	6

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109	Future exploration of Ceres as an ocean world. Nature Astronomy, 2020, 4, 732-734.	10.1	6
110	Thermal convection in the crust of the dwarf planet â€“ I. Ceres. Monthly Notices of the Royal Astronomical Society, 2020, 494, 5704-5712.	4.4	6
111	Laboratory Investigations Coupled to VIR/Dawn Observations to Quantify the Large Concentrations of Organic Matter on Ceres. Minerals (Basel, Switzerland), 2021, 11, 719.	2.0	6
112	Hypotheses for Triton's plumes: New analyses and future remote sensing tests. Icarus, 2022, 375, 114835.	2.5	6
113	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
114	The Radiation Environment of Ceres and Implications for Surface Sampling. Astrobiology, 2022, 22, 509-519.	3.0	6
115	GAUSS - genesis of asteroids and evolution of the solar system. Experimental Astronomy, 0, , 1.	3.7	5
116	Session 13. The Deep Cold Biosphere? Interior Processes of Icy Satellites and Dwarf Planets. Astrobiology, 2008, 8, 344-346.	3.0	4
117	The Relationship between Centaurs and Jupiter Family Comets with Implications for K-Pg-type Impacts. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	4
118	Crevasse Propagation on Brittle Ice: Application to Cycloids on Europa. Geophysical Research Letters, 2019, 46, 11756-11763.	4.0	4
119	Science Drivers for the Future Exploration of Ceres: From Solar System Evolution to Ocean World Science. Planetary Science Journal, 2022, 3, 64.	3.6	4
120	Autonomous Onboard Point Source Detection by Small Exploration Spacecraft. Publications of the Astronomical Society of the Pacific, 2015, 127, 1279-1291.	3.1	3
121	Volume uncertainty of (7)Âlris shape models from disc-resolved images. Monthly Notices of the Royal Astronomical Society, 2020, 499, 4545-4560.	4.4	3
122	A bountiful harvest on Ceres. Nature Astronomy, 2020, 4, 807-807.	10.1	3
123	Phoebeâ€™s differentiated interior from refined shape analysis. Astronomy and Astrophysics, 2020, 643, L10.	5.1	3
124	Forward modeling of Ceres' Gravity Field for Planetary Protection Assessment. , 2016, , .		2
125	The In Situ Exploration of a Relict Ocean World: An Assessment of Potential Landing and Sampling Sites for a Future Mission to the Surface of Ceres. Planetary Science Journal, 2021, 2, 94.	3.6	2
126	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

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127	Introduction to the Special Issue: Ice on Ceres. Journal of Geophysical Research E: Planets, 2019, 124, 1639-1649.	3.6	1
128	Ceres, a wet planet: The view after Dawn. Chemie Der Erde, 2022, 82, 125745.	2.0	1
129	Water and Volatiles in the Outer Solar System. Space Sciences Series of ISSI, 2017, , 191-231.	0.0	0
130	Ceresâ€™ Internal Evolution. , 2022, , 159-172.		0