

# Nancy Chabot

## List of Publications by Year in descending order

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Version: 2024-02-01

90  
papers

3,669  
citations

136950

32  
h-index

138484

58  
g-index

96  
all docs

96  
docs citations

96  
times ranked

2114  
citing authors

#	ARTICLE	IF	CITATIONS
1	A revised trapped melt model for iron meteorites applied to the IIIAB group. Meteoritics and Planetary Science, 2022, 57, 200-227.	1.6	15
2	Chemical study of group IIIIF iron meteorites and the potentially related pallasites Zinder and Northwest Africa 1911. Geochimica Et Cosmochimica Acta, 2022, 323, 202-219.	3.9	10
3	Arecibo S-band Radar Characterization of Local-scale Heterogeneities within Mercury's North Polar Deposits. Planetary Science Journal, 2022, 3, 62.	3.6	11
4	Science Goals and Mission Concept for a Landed Investigation of Mercury. Planetary Science Journal, 2022, 3, 68.	3.6	2
5	IVA iron meteorites as late-stage crystallization products affected by multiple collisional events. Geochimica Et Cosmochimica Acta, 2022, 331, 1-17.	3.9	7
6	The ESA Hera Mission: Detailed Characterization of the DART Impact Outcome and of the Binary Asteroid (65803) Didymos. Planetary Science Journal, 2022, 3, 160.	3.6	82
7	Fundamental and Interdisciplinary Questions Drive the Scientific Exploration of Mercury. , 2021, 53, .		0
8	One the Case For Landed Mercury Science. , 2021, 53, .		0
9	Science Opportunities offered by Mercury's Ice-Bearing Polar Deposits. , 2021, 53, .		0
10	Mercury Lander: A New-Frontiers-Class Planetary Mission Concept Design. , 2021, , .		0
11	Near-Earth Object Characterization Priorities and Considerations for Planetary Defense. , 2021, 53, .		3
12	Collaborative Actions to Enable Richer and More Complex Planetary Science Mission Data. , 2021, 53, .		0
13	Mercury's Low Reflectance Material " Evidence for Graphite Flotation in a Magma Ocean?. , 2021, 53, .		0
14	Cryogenic Comet Sample Return. , 2021, 53, .		1
15	Morphometry and Temperature of Simple Craters in Mercury's Northern Hemisphere: Implications for Stability of Water Ice. Planetary Science Journal, 2021, 2, 97.	3.6	3
16	Analytical protocols for Phobos regolith samples returned by the Martian Moons eXploration (MMX) mission. Earth, Planets and Space, 2021, 73, 120.	2.5	8
17	The Double Asteroid Redirection Test (DART): Planetary Defense Investigations and Requirements. Planetary Science Journal, 2021, 2, 173.	3.6	110
18	Science operation plan of Phobos and Deimos from the MMX spacecraft. Earth, Planets and Space, 2021, 73, .	2.5	22

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19	MEGANE investigations of Phobos and the Small Body Mapping Tool. Earth, Planets and Space, 2021, 73, 217.	2.5	4
20	DART mission determination of momentum transfer: Model of ejecta plume observations. Icarus, 2020, 352, 113989.	2.5	34
21	Heavy iron isotope composition of iron meteorites explained by core crystallization. Nature Geoscience, 2020, 13, 611-615.	12.9	18
22	A benchmarking and sensitivity study of the full two-body gravitational dynamics of the DART mission target, binary asteroid 65803 Didymos. Icarus, 2020, 349, 113849.	2.5	24
23	Experimental partitioning of trace elements into schreibersite with applications to iron meteorites. Meteoritics and Planetary Science, 2020, 55, 726-743.	1.6	4
24	Impact modeling for the Double Asteroid Redirection Test (DART) mission. International Journal of Impact Engineering, 2020, 142, 103528.	5.0	18
25	New Illumination and Temperature Constraints of Mercury's Volatile Polar Deposits. Planetary Science Journal, 2020, 1, 57.	3.6	11
26	Using dust shed from asteroids as microsamples to link remote measurements with meteorite classes. Meteoritics and Planetary Science, 2019, 54, 2046-2066.	1.6	4
27	Revolutionizing Our Understanding of the Solar System via Sample Return from Mercury. Space Science Reviews, 2019, 215, 1.	8.1	10
28	The thickness of radar-bright deposits in Mercury's northern hemisphere from individual Mercury Laser Altimeter tracks. Icarus, 2019, 323, 40-45.	2.5	10
29	Measuring the Elemental Composition of Phobos: The Mars Moon Exploration with Gamma rays and Neutrons (MEGANE) Investigation for the Martian Moons eXploration (MMX) Mission. Earth and Space Science, 2019, 6, 2605-2623.	2.6	26
30	Impact Modeling for the Double Asteroid Redirection Test Mission. , 2019, , .		0
31	Investigating Mercury's South Polar Deposits: Arecibo Radar Observations and High-Resolution Determination of Illumination Conditions. Journal of Geophysical Research E: Planets, 2018, 123, 666-681.	3.6	37
32	AIDA DART asteroid deflection test: Planetary defense and science objectives. Planetary and Space Science, 2018, 157, 104-115.	1.7	162
33	Constraining the thickness of polar ice deposits on Mercury using the Mercury Laser Altimeter and small craters in permanently shadowed regions. Icarus, 2018, 305, 139-148.	2.5	17
34	The Chemical Composition of Mercury. , 2018, , 30-51.		43
35	Mercury's Polar Deposits. , 2018, , 346-370.		9
36	Examining the Potential Contribution of the Hokusai Impact to Water Ice on Mercury. Journal of Geophysical Research E: Planets, 2018, 123, 2628-2646.	3.6	23

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37	Calibration, Projection, and Final Image Products of MESSENGER's Mercury Dual Imaging System. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	53
38	Iron and Stony-iron Meteorites: Evidence for the Formation, Crystallization, and Early Impact Histories of Differentiated Planetesimals. , 2017, , 136-158.		5
39	Experimental determination of partitioning in the Fe-Ni system for applications to modeling meteoritic metals. <i>Meteoritics and Planetary Science</i> , 2017, 52, 1133-1145.	1.6	34
40	Mars-Moons Exploration, Reconnaissance, and Landed Investigation (MERLIN). , 2016, , .		1
41	Comparison of areas in shadow from imaging and altimetry in the north polar region of Mercury and implications for polar ice deposits. <i>Icarus</i> , 2016, 280, 158-171.	2.5	40
42	Analysis of MESSENGER high-resolution images of Mercury's hollows and implications for hollow formation. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1798-1813.	3.6	30
43	The Main-belt Asteroid and NEO Tour with Imaging and Spectroscopy (MANTIS). , 2016, , .		4
44	Methodology for finding and evaluating safe landing sites on small bodies. <i>Planetary and Space Science</i> , 2016, 134, 71-81.	1.7	8
45	Imaging Mercury's polar deposits during MESSENGER's low-altitude campaign. <i>Geophysical Research Letters</i> , 2016, 43, 9461-9468.	4.0	31
46	Mercury's global color mosaic: An update from MESSENGER's orbital observations. <i>Icarus</i> , 2015, 257, 477-488.	2.5	27
47	The effect of oxygen as a light element in metallic liquids on partitioning behavior. <i>Meteoritics and Planetary Science</i> , 2015, 50, 530-546.	1.6	11
48	Orbital multispectral mapping of Mercury with the MESSENGER Mercury Dual Imaging System: Evidence for the origins of plains units and low-reflectance material. <i>Icarus</i> , 2015, 254, 287-305.	2.5	95
49	Remembering Mike Drake. <i>Meteoritics and Planetary Science</i> , 2015, 50, 523-529.	1.6	0
50	Stratigraphy of the Caloris basin, Mercury: Implications for volcanic history and basin impact melt. <i>Icarus</i> , 2015, 250, 413-429.	2.5	49
51	Phobos and Deimos. , 2015, , .		12
52	Phase-ratio images of the surface of Mercury: Evidence for differences in sub-resolution texture. <i>Icarus</i> , 2014, 242, 142-148.	2.5	27
53	MERLIN: Mars-Moon Exploration, Reconnaissance and Landed Investigation. <i>Acta Astronautica</i> , 2014, 93, 475-482.	3.2	8
54	Images of surface volatiles in Mercury's polar craters acquired by the MESSENGER spacecraft. <i>Geology</i> , 2014, 42, 1051-1054.	4.4	67

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55	Experimental constraints on Mercury's core composition. <i>Earth and Planetary Science Letters</i> , 2014, 390, 199-208.	4.4	73
56	Craters hosting radar-bright deposits in Mercury's north polar region: Areas of persistent shadow determined from MESSENGER images. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 26-36.	3.6	36
57	Wüstite in the fusion crust of Almahata Sitta sulfide-metal assemblage <sc>MS</sc>: Evidence for oxygen in metallic melts. <i>Meteoritics and Planetary Science</i> , 2013, 48, 730-743.	1.6	7
58	Mercury's hollows: Constraints on formation and composition from analysis of geological setting and spectral reflectance. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1013-1032.	3.6	97
59	Areas of permanent shadow in Mercury's south polar region ascertained by MESSENGER orbital imaging. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	43
60	Hollows on Mercury: MESSENGER Evidence for Geologically Recent Volatile-Related Activity. <i>Science</i> , 2011, 333, 1856-1859.	12.6	136
61	Flood Volcanism in the Northern High Latitudes of Mercury Revealed by MESSENGER. <i>Science</i> , 2011, 333, 1853-1856.	12.6	225
62	Group IVA irons: New constraints on the crystallization and cooling history of an asteroidal core with a complex history. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 6821-6843.	3.9	76
63	Partitioning behavior at 9GPa in the Fe-S system and implications for planetary evolution. <i>Earth and Planetary Science Letters</i> , 2011, 305, 425-434.	4.4	16
64	Moderately and slightly siderophile element constraints on the depth and extent of melting in early Mars. <i>Meteoritics and Planetary Science</i> , 2011, 46, 157-176.	1.6	69
65	Photometric correction of Mercury's global color mosaic. <i>Planetary and Space Science</i> , 2011, 59, 1873-1887.	1.7	22
66	Mercury's spectrophotometric properties: Update from the Mercury Dual Imaging System observations during the third MESSENGER flyby. <i>Planetary and Space Science</i> , 2011, 59, 1853-1872.	1.7	22
67	Effect of silicon on trace element partitioning in iron-bearing metallic melts. <i>Meteoritics and Planetary Science</i> , 2010, 45, 1243-1257.	1.6	26
68	Iron meteorites: Crystallization, thermal history, parent bodies, and origin. <i>Chemie Der Erde</i> , 2009, 69, 293-325.	2.0	216
69	The iron-nickel-phosphorus system: Effects on the distribution of trace elements during the evolution of iron meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 2674-2691.	3.9	35
70	An investigation of the behavior of Cu and Cr during iron meteorite crystallization. <i>Meteoritics and Planetary Science</i> , 2009, 44, 505-519.	1.6	34
71	In-flight performance of MESSENGER's Mercury Dual Imaging System. <i>Proceedings of SPIE</i> , 2009, , .	0.8	22
72	The Evolution of Mercury's Crust: A Global Perspective from MESSENGER. <i>Science</i> , 2009, 324, 613-618.	12.6	194

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73	Modeling fractional crystallization of group IVB iron meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 2198-2216.	3.9	136
74	The Fe- <sup>54</sup> Fe system at 5GPa and implications for Earth's core. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 4146-4158.	3.9	48
75	The effect of Ni on element partitioning during iron meteorite crystallization. <i>Meteoritics and Planetary Science</i> , 2007, 42, 1735-1750.	1.6	26
76	The influence of carbon on trace element partitioning behavior. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 1322-1335.	3.9	67
77	Evolution of Asteroidal Cores. , 2006, , 747-772.		81
78	Shock melts in QUE 94411, Hammadah al Hamra 237, and Bencubbin: Remains of the missing matrix?. <i>Meteoritics and Planetary Science</i> , 2005, 40, 1377-1391.	1.6	27
79	Conditions of core formation in the earth: Constraints from Nickel and Cobalt partitioning. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 2141-2151.	3.9	96
80	Sulfur contents of the parental metallic cores of magmatic iron meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 3607-3618.	3.9	102
81	The parameterization of solid metal-liquid metal partitioning of siderophile elements. <i>Meteoritics and Planetary Science</i> , 2003, 38, 1425-1436.	1.6	128
82	An experimental test of Henry's Law in solid metal-liquid metal systems with implications for iron meteorites. <i>Meteoritics and Planetary Science</i> , 2003, 38, 181-196.	1.6	86
83	Core formation in the Earth and Moon: new experimental constraints from V, Cr, and Mn. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 2077-2091.	3.9	113
84	Analysis of Lunar Lineaments: Far Side and Polar Mapping. <i>Icarus</i> , 2000, 147, 301-308.	2.5	12
85	Crystallization of magmatic iron meteorites: The effects of phosphorus and liquid immiscibility. <i>Meteoritics and Planetary Science</i> , 2000, 35, 807-816.	1.6	41
86	AMBASSADOR: Asteroid sample return mission to 7 Iris. <i>Acta Astronautica</i> , 1999, 45, 415-422.	3.2	3
87	Crystallization of magmatic iron meteorites: The role of mixing in the molten core. <i>Meteoritics and Planetary Science</i> , 1999, 34, 235-246.	1.6	26
88	Potassium solubility in metal: the effects of composition at 15 kbar and 1900°C on partitioning between iron alloys and silicate melts. <i>Earth and Planetary Science Letters</i> , 1999, 172, 323-335.	4.4	71
89	An experimental study of silver and palladium partitioning between solid and liquid metal, with applications to iron meteorites. <i>Meteoritics and Planetary Science</i> , 1997, 32, 637-645.	1.6	24
90	The case for landed Mercury science. <i>Experimental Astronomy</i> , 0, , 1.	3.7	0