Frank Postberg

List of Publications by Year
in descending order

83 papers	4,137 citations	159585 30 h-index	118850 62 g-index
83 all docs	83 docs citations	83 times ranked	2521 citing authors

#	Article	IF	Citations
1	Sodium salts in E-ring ice grains from an ocean below the surface of Enceladus. Nature, 2009, 459, 1098-1101.	27.8	435
2	A salt-water reservoir as the source of a compositionally stratified plume on Enceladus. Nature, 2011, 474, 620-622.	27.8	394
3	Ongoing hydrothermal activities within Enceladus. Nature, 2015, 519, 207-210.	27.8	382
4	Macromolecular organic compounds from the depths of Enceladus. Nature, 2018, 558, 564-568.	27.8	282
5	Powering prolonged hydrothermal activity inside Enceladus. Nature Astronomy, 2017, 1, 841-847.	10.1	158
6	Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft. Science, 2014, 345, 786-791.	12.6	152
7	High-temperature waterâ€“rock interactions and hydrothermal environments in the chondrite-like core of Enceladus. Nature Communications, 2015, 6, 8604.	12.8	152
8	The E-ring in the vicinity of Enceladus. Icarus, 2008, 193, 438-454.	2.5	126
9	The E ring in the vicinity of Enceladus. Icarus, 2008, 193, 420-437.	2.5	114
10	Low-mass nitrogen-, oxygen-bearing, and aromatic compounds in Enceladean ice grains. Monthly Notices of the Royal Astronomical Society, 2019, 489, 5231-5243.	4.4	98
11	Flux and composition of interstellar dust at Saturn from Cassiniâ€™s Cosmic Dust Analyzer. Science, 2016, 352, 312-318.	12.6	97
12	The Enceladus Orbilander Mission Concept: Balancing Return and Resources in the Search for Life. Planetary Science Journal, 2021, 2, 77.	3.6	74
13	The composition of Saturn's E ring. Monthly Notices of the Royal Astronomical Society, 2007, 377, 1588-1596.	4.4	73
14	Composition of Saturnian Stream Particles. Science, 2005, 307, 1274-1276.	12.6	72
15	Composition of jovian dust stream particles. Icarus, 2006, 183, 122-134.	2.5	64
16	Synthesis and Characterization of Polypyrrole-Coated Sulfur-Rich Latex Particles:Â New Synthetic Mimics for Sulfur-Based Micrometeorites. Chemistry of Materials, 2006, 18, 2758-2765.	6.7	56
17	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
18	The Dust Halo of Saturn's Largest Icy Moon, Rhea. Science, 2008, 319, 1380-1384.	12.6	53

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19	A 2 MV Van de Graaff accelerator as a tool for planetary and impact physics research. Review of Scientific Instruments, 2011, 82, 095111.	1.3	53
20	In situ dust measurements in the inner Saturnian system. Planetary and Space Science, 2006, 54, 967-987.	1.7	50
21	In situ collection of dust grains falling from Saturnâ€™s rings into its atmosphere. Science, 2018, 362, .	12.6	44
22	Ice-Ocean Exchange Processes in the Jovian and Saturnian Satellites. Space Science Reviews, 2020, 216, 1.	8.1	43
23	The Science Case for a Return to Enceladus. Planetary Science Journal, 2021, 2, 132.	3.6	40
24	Mass spectrometry of hyperâ€velocity impacts of organic micrograins. Rapid Communications in Mass Spectrometry, 2009, 23, 3895-3906.	1.5	39
25	Enceladus Life Finder: The search for life in a habitable Moon. , 2016, , .		39
26	Discriminating Abiotic and Biotic Fingerprints of Amino Acids and Fatty Acids in Ice Grains Relevant to Ocean Worlds. Astrobiology, 2020, 20, 1168-1184.	3.0	38
27	OSS (Outer Solar System): a fundamental and planetary physics mission to Neptune, Triton and the Kuiper Belt. Experimental Astronomy, 2012, 34, 203-242.	3.7	37
28	Analog Experiments for the Identification of Trace Biosignatures in Ice Grains from Extraterrestrial Ocean Worlds. Astrobiology, 2020, 20, 179-189.	3.0	37
29	Discriminating contamination from particle components in spectra of Cassini's dust detector CDA. Planetary and Space Science, 2009, 57, 1359-1374.	1.7	35
30	The Geochemistry of Enceladus: Composition and Controls. , 2018, , .		35
31	Interplanetary dust detected by the Cassini CDA Chemical Analyser. Icarus, 2007, 190, 643-654.	2.5	34
32	Compositional mapping of planetary moons by mass spectrometry of dust ejecta. Planetary and Space Science, 2011, 59, 1815-1825.	1.7	33
33	Charge separation and isolation in strong water droplet impacts. Physical Chemistry Chemical Physics, 2015, 17, 6858-6864.	2.8	32
34	The production of platinum-coated silicate nanoparticle aggregates for use in hypervelocity impact experiments. Planetary and Space Science, 2009, 57, 2081-2086.	1.7	30
35	Final reports of the Stardust Interstellar Preliminary Examination. Meteoritics and Planetary Science, 2014, 49, 1720-1733.	1.6	29
36	Oxidation processes diversify the metabolic menu on Enceladus. Icarus, 2021, 364, 114248.	2.5	29

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37	The cosmic dust analyser onboard cassini: ten years of discoveries. CEAS Space Journal, 2011, 2, 3-16.	2.3	26
38	Explorer of Enceladus and Titan (E2T): Investigating ocean worlds' evolution and habitability in the solar system. Planetary and Space Science, 2018, 155, 73-90.	1.7	26
39	Stream particles as the probe of the dust-plasma-magnetosphere interaction at Saturn. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	25
40	Experimental and Simulation Efforts in the Astrobiological Exploration of Exooceans. Space Science Reviews, 2020, 216, 9.	8.1	25
41	Stardust Interstellar Preliminary Examination X: Impact speeds and directions of interstellar grains on the Stardust dust collector. Meteoritics and Planetary Science, 2014, 49, 1680-1697.	1.6	24
42	Close Cassini flybys of Saturnâ€™s ring moons Pan, Daphnis, Atlas, Pandora, and Epimetheus. Science, 2019, 364, .	12.6	24
43	Calibration of relative sensitivity factors for impact ionization detectors with high-velocity silicate microparticles. Icarus, 2014, 241, 336-345.	2.5	22
44	Impact ionisation mass spectrometry of polypyrrole-coated pyrrhotite microparticles. Planetary and Space Science, 2014, 97, 9-22.	1.7	21
45	Analogue spectra for impact ionization mass spectra of water ice grains obtained at different impact speeds in space. Rapid Communications in Mass Spectrometry, 2019, 33, 1751-1760.	1.5	21
46	Linear high resolution dust mass spectrometer for a mission to the Galilean satellites. Planetary and Space Science, 2012, 65, 10-20.	1.7	20
47	Interstellar Dust in the Solar System. Space Science Reviews, 2019, 215, 1.	8.1	20
48	Surface, Subsurface and Atmosphere Exchanges onÂtheÂSatellites ofÂtheÂOuter Solar System. Space Science Reviews, 2010, 153, 375-410.	8.1	19
49	Stardust Interstellar Preliminary Examination <scp>IX</scp>: Highâ€speed interstellar dust analog capture in Stardust flightâ€spare aerogel. Meteoritics and Planetary Science, 2014, 49, 1666-1679.	1.6	19
50	Stardust Interstellar Preliminary Examination <scp>II</scp>: Curating the interstellar dust collector, picokeystones, and sources of impact tracks. Meteoritics and Planetary Science, 2014, 49, 1522-1547.	1.6	18
51	Stardust Interstellar Preliminary Examination <scp>IV</scp>: Scanning transmission Xâ€ray microscopy analyses of impact features in the Stardust Interstellar Dust Collector. Meteoritics and Planetary Science, 2014, 49, 1562-1593.	1.6	18
52	Key Technologies and Instrumentation for Subsurface Exploration of Ocean Worlds. Space Science Reviews, 2020, 216, 1.	8.1	18
53	Plume and Surface Composition of Enceladus. , 2018, , .		17
54	Cassini dust stream particle measurements during the first three orbits at Saturn. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	16

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55	Stardust Interstellar Preliminary Examination <scp>XI</scp>: Identification and elemental analysis of impact craters on Al foils from the Stardust Interstellar Dust Collector. Meteoritics and Planetary Science, 2014, 49, 1698-1719.	1.6	16
56	Stardust Interstellar Preliminary Examination I: Identification of tracks in aerogel. Meteoritics and Planetary Science, 2014, 49, 1509-1521.	1.6	16
57	Impact ionisation mass spectrometry of platinum-coated olivine and magnesite-dominated cosmic dust analogues. Planetary and Space Science, 2018, 156, 96-110.	1.7	16
58	Impact ionization mass spectra of anorthite cosmic dust analogue particles. Journal of Geophysical Research, 2012, 117, .	3.3	15
59	Science goals and mission concept for the future exploration of Titan and Enceladus. Planetary and Space Science, 2014, 104, 59-77.	1.7	15
60	Stardust Interstellar Preliminary Examination <scp>VII</scp>: Synchrotron Xâ€ray fluorescence analysis of six Stardust interstellar candidates measured with the Advanced Photon Source 2â€<scp>ID</scp>â€D microprobe. Meteoritics and Planetary Science, 2014, 49, 1626-1644.	1.6	13
61	Stardust Interstellar Preliminary Examination VIII: Identification of crystalline material in two interstellar candidates. Meteoritics and Planetary Science, 2014, 49, 1645-1665.	1.6	12
62	Stardust Interstellar Preliminary Examination <scp>VI</scp>: Quantitative elemental analysis by synchrotron Xâ€ray fluorescence nanoimaging of eight impact features in aerogel. Meteoritics and Planetary Science, 2014, 49, 1612-1625.	1.6	12
63	Stardust Interstellar Preliminary Examination V: <scp>XRF</scp> analyses of interstellar dust candidates at <scp>ESRF ID</scp>13. Meteoritics and Planetary Science, 2014, 49, 1594-1611.	1.6	12
64	Stardust Interstellar Preliminary Examination <scp>III</scp>: Infrared spectroscopic analysis of interstellar dust candidates. Meteoritics and Planetary Science, 2014, 49, 1548-1561.	1.6	12
65	Active Cosmic Dust Collector. Planetary and Space Science, 2012, 60, 261-273.	1.7	11
66	Under the Sea of Enceladus. Scientific American, 2016, 315, 38-45.	1.0	10
67	Novel instrument for Dust Astronomy: Dust Telescope. , 2011, , .		9
68	Dynamics, Composition, and Origin of Jovian and Saturnian Dust-Stream Particles. Astrophysics and Space Science Library, 2012, , 77-117.	2.7	9
69	Non-destructive search for interstellar dust using synchrotron microprobes. , 2010, , .		8
70	Interaction of the solar wind and stream particles, results from the Cassini dust detector. , 2010, , .		6
71	Probing IMF using nanodust measurements from inside Saturn's magnetosphere. Geophysical Research Letters, 2013, 40, 2902-2906.	4.0	6
72	Morphology of craters generated by hypervelocity impacts of micronâ€sized polypyrroleâ€coated olivine particles. Meteoritics and Planetary Science, 2014, 49, 1375-1387.	1.6	6

#	ARTICLE	IF	CITATIONS
73	Dusty Rings. , 0, , 308-337.		6
74	Interplanetary magnetic field structure at Saturn inferred from nanodust measurements during the 2013 aurora campaign. Icarus, 2016, 263, 10-16.	2.5	5
75	A cosmic dust detection suite for the deep space Gateway. Advances in Space Research, 2021, 68, 85-104.	2.6	5
76	Enceladus as a potential oasis for life: Science goals and investigations for future explorations. Experimental Astronomy, 2022, 54, 809-847.	3.7	5
77	An optimum opportunity for interstellar dust measurements by the JUICE mission. Planetary and Space Science, 2012, 71, 142-146.	1.7	4
78	SARIM PLUSâ€"sample return of comet 67P/CG and of interstellar matter. Experimental Astronomy, 2012, 33, 723-751.	3.7	3
79	Hyperdust: An advanced in-situ detection and chemical analysis of microparticles in space. , 2015, , .		3
80	Dust Emission by Active Moons. Space Science Reviews, 2018, 214, 1.	8.1	3
81	Exploration of Enceladus and Titan: investigating ocean worldsâ€™ evolution and habitability in the Saturn system. Experimental Astronomy, 2022, 54, 877-910.	3.7	3
82	Surface, Subsurface and Atmosphere Exchanges onÂtheÂSatellites ofÂtheÂOuter Solar System. Space Sciences Series of ISSI, 2010, , 373-408.	0.0	1
83	Organic matter in interstellar dust lost at the approach to the heliosphere. Astronomy and Astrophysics, 2020, 643, A50.	5.1	1