Kathleen E Mandt

List of Publications by Year
in descending order

129 papers	3,579 citations	87888 38 h-index	155660 55 g-index
146 all docs	146 docs citations	146 times ranked	2539 citing authors

#	Article	IF	Citations
1	INMS-derived composition of Titan's upper atmosphere: Analysis methods and model comparison. Planetary and Space Science, 2009, 57, 1895-1916.	1.7	152
2	Origin of the Medusae Fossae Formation, Mars: Insights from a synoptic approach. Journal of Geophysical Research, 2008, 113, .	3.3	141
3	Heavy ions, temperatures and winds in Titan's ionosphere: Combined Cassini CAPS and INMS observations. Planetary and Space Science, 2009, 57, 1847-1856.	1.7	113
4	On the amount of heavy molecular ions in Titan's ionosphere. Planetary and Space Science, 2009, 57, 1857-1865.	1.7	96
5	ISOTOPIC RATIOS IN TITAN's METHANE: MEASUREMENTS AND MODELING. Astrophysical Journal, 2012, 749, 159.	4.5	91
6	Interplanetary coronal mass ejection observed at STEREOâ€A, Mars, comet 67P/Churyumovâ€Gerasimenko, Saturn, and New Horizons en route to Pluto: Comparison of its Forbush decreases at 1.4, 3.1, and 9.9ÂAU. Journal of Geophysical Research: Space Physics, 2017, 122, 7865-7890.	2.4	87
7	Yardangs in terrestrial ignimbrites: Synergistic remote and field observations on Earth with applications to Mars. Planetary and Space Science, 2010, 58, 459-471.	1.7	84
8	Evolution of the ion environment of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A20.	5.1	76
9	Ionospheric plasma of comet 67P probed by<i>Rosetta</i>at 3Âau from the Sun. Monthly Notices of the Royal Astronomical Society, 2016, 462, S331-S351.	4.4	75
10	PROTOSOLAR AMMONIA AS THE UNIQUE SOURCE OF TITAN's NITROGEN. Astrophysical Journal Letters, 2014, 788, L24.	8.3	74
11	Spatial distribution of lowâ€energy plasma around comet 67P/CG from Rosetta measurements. Geophysical Research Letters, 2015, 42, 4263-4269.	4.0	74
12	Titan's thermospheric response to various plasma environments. Journal of Geophysical Research, 2011, 116, .	3.3	73
13	Negative ion densities in the ionosphere of Titanâ€“Cassini RPWS/LP results. Planetary and Space Science, 2013, 84, 153-162.	1.7	73
14	Structure of Titan's ionosphere: Model comparisons with Cassini data. Planetary and Space Science, 2009, 57, 1834-1846.	1.7	68
15	Ion densities and composition of Titan's upper atmosphere derived from the Cassini Ion Neutral Mass Spectrometer: Analysis methods and comparison of measured ion densities to photochemical model simulations. Journal of Geophysical Research, 2012, 117, .	3.3	67
16	Composition-dependent outgassing of comet 67P/Churyumov-Gerasimenko from ROSINA/DFMS. Astronomy and Astrophysics, 2015, 583, A4.	5.1	67
17	THE¹²C/¹³C RATIO ON TITAN FROM<i>CASSINI</i>INMS MEASUREMENTS AND IMPLICATIONS FOR THE EVOLUTION OF METHANE. Astrophysical Journal, 2012, 749, 160.	4.5	66
18	Isotopic evolution of the major constituents of Titan's atmosphere based on Cassini data. Planetary and Space Science, 2009, 57, 1917-1930.	1.7	63

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19	RPC observation of the development and evolution of plasma interaction boundaries at 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S9-S22.	4.4	62
20	Characterizing cometary electrons with kappa distributions. Journal of Geophysical Research: Space Physics, 2016, 121, 7407-7422.	2.4	62
21	Titan's ionospheric composition and structure: Photochemical modeling of Cassini INMS data. Journal of Geophysical Research, 2012, 117, .	3.3	60
22	The carbon monoxide-rich interstellar comet 2I/Borisov. Nature Astronomy, 2020, 4, 867-871.	10.1	60
23	ORIGIN OF MOLECULAR OXYGEN IN COMET 67P/CHURYUMOVâ€“GERASIMENKO. Astrophysical Journal Letters, 2016, 823, L41.	8.3	58
24	A Revised Sensitivity Model for Cassini INMS: Results at Titan. Space Science Reviews, 2015, 190, 47-84.	8.1	54
25	Suprathermal electron environment of comet 67P/Churyumov-Gerasimenko: Observations from the Rosetta Ion and Electron Sensor. Astronomy and Astrophysics, 2015, 583, A24.	5.1	51
26	Uranus and Neptune missions: A study in advance of the next Planetary Science Decadal Survey. Planetary and Space Science, 2019, 177, 104680.	1.7	50
27	Suprathermal electrons near the nucleus of comet 67P/Churyumovâ€Gerasimenko at 3â€‰AU: Model comparisons with Rosetta data. Journal of Geophysical Research: Space Physics, 2016, 121, 5815-5836.	2.4	49
28	Rosetta observations of solar wind interaction with the comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A21.	5.1	48
29	Mass-loading, pile-up, and mirror-mode waves at comet 67P/Churyumov-Gerasimenko. Annales Geophysicae, 2016, 34, 1-15.	1.6	46
30	The Rosetta Ion and Electron Sensor (IES) measurement of the development of pickup ions from comet 67P/Churyumovâ€Gerasimenko. Geophysical Research Letters, 2015, 42, 3093-3099.	4.0	45
31	Statistical analysis of suprathermal electron drivers at 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S312-S322.	4.4	45
32	Photochemistry on Pluto â€“ I. Hydrocarbons and aerosols. Monthly Notices of the Royal Astronomical Society, 2017, 472, 104-117.	4.4	45
33	ROSINA/DFMS and IES observations of 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. Astronomy and Astrophysics, 2015, 583, A2.	5.1	43
34	CME impact on comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S45-S56.	4.4	42
35	Distinct erosional progressions in the Medusae Fossae Formation, Mars, indicate contrasting environmental conditions. Icarus, 2009, 204, 471-477.	2.5	40
36	Developing a selfâ€consistent description of Titan's upper atmosphere without hydrodynamic escape. Journal of Geophysical Research: Space Physics, 2014, 119, 4957-4972.	2.4	38

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37	The presence of clathrates in comet 67P/Churyumov-Gerasimenko. Science Advances, 2016, 2, e1501781.	10.3	38
38	Photochemistry on Pluto: part II HCN and nitrogen isotope fractionation. Monthly Notices of the Royal Astronomical Society, 2017, 472, 118-128.	4.4	38
39	Titan's cold case files - Outstanding questions after Cassini-Huygens. Planetary and Space Science, 2018, 155, 50-72.	1.7	37
40	Isotopic composition of CO₂in the coma of 67P/Churyumov-Gerasimenko measured with ROSINA/DFMS. Astronomy and Astrophysics, 2017, 605, A50.	5.1	35
41	Simulating the oneâ€dimensional structure of Titan's upper atmosphere: 1. Formulation of the Titan Global Ionosphereâ€Thermosphere Model and benchmark simulations. Journal of Geophysical Research, 2010, 115, .	3.3	34
42	Solar wind interaction with comet 67P: Impacts of corotating interaction regions. Journal of Geophysical Research: Space Physics, 2016, 121, 949-965.	2.4	33
43	A primordial origin for the atmospheric methane of Saturnâ€™s moon Titan. Icarus, 2009, 204, 749-751.	2.5	31
44	13C and 15N fractionation of CH4/N2 mixtures during photochemical aerosol formation: Relevance to Titan. Icarus, 2016, 270, 421-428.	2.5	31
45	Contributions of solar wind and micrometeoroids to molecular hydrogen in the lunar exosphere. Icarus, 2017, 283, 31-37.	2.5	30
46	Lunar swirls: Far-UV characteristics. Icarus, 2016, 273, 68-74.	2.5	29
47	REMOVAL OF TITAN'S ATMOSPHERIC NOBLE GASES BY THEIR SEQUESTRATION IN SURFACE CLATHRATES. Astrophysical Journal Letters, 2011, 740, L9.	8.3	28
48	Charged particle signatures of the diamagnetic cavity of comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S415-S421.	4.4	28
49	Ion chemistry in the coma of comet 67P near perihelion. Monthly Notices of the Royal Astronomical Society, 2016, 462, S67-S77.	4.4	28
50	Simulating the oneâ€dimensional structure of Titan's upper atmosphere: 2. Alternative scenarios for methane escape. Journal of Geophysical Research, 2010, 115, .	3.3	27
51	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. Space Science Reviews, 2015, 197, 297-342.	8.1	25
52	FORMATION CONDITIONS OF ENCELADUS AND ORIGIN OF ITS METHANE RESERVOIR. Astrophysical Journal, 2009, 701, L39-L42.	4.5	24
53	Simulating the one-dimensional structure of Titan's upper atmosphere: 3. Mechanisms determining methane escape. Journal of Geophysical Research, 2011, 116, .	3.3	24
54	Ion and aerosol precursor densities in Titan's ionosphere: A multiâ€instrument case study. Journal of Geophysical Research: Space Physics, 2016, 121, 10075-10090.	2.4	23

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55	Origin of Molecular Oxygen in Comets: Current Knowledge and Perspectives. Space Science Reviews, 2018, 214, 1.	8.1	23
56	NEW INSIGHTS ON SATURN'S FORMATION FROM ITS NITROGEN ISOTOPIC COMPOSITION. Astrophysical Journal Letters, 2014, 796, L28.	8.3	22
57	Ionization balance in Titanâ€™s nightside ionosphere. Icarus, 2015, 248, 539-546.	2.5	22
58	An empirical approach to modeling ion production rates in Titan's ionosphere I: Ion production rates on the dayside and globally. Journal of Geophysical Research: Space Physics, 2015, 120, 1264-1280.	2.4	18
59	Titan's ionosphere: A survey of solar EUV influences. Journal of Geophysical Research: Space Physics, 2017, 122, 7491-7503.	2.4	17
60	On the possible noble gas deficiency of Plutoâ€™s atmosphere. Icarus, 2013, 225, 856-861.	2.5	16
61	Effects of Space Weathering and Porosity on the Farâ€UV Reflectance of Amundsen Crater. Journal of Geophysical Research E: Planets, 2019, 124, 823-836.	3.6	16
62	Cold Traps of Hypervolatiles in the Protosolar Nebula at the Origin of the Peculiar Composition of Comet C/2016 R2 (PanSTARRS). Planetary Science Journal, 2021, 2, 72.	3.6	16
63	Investigating magnetospheric interaction effects on Titanâ€™s ionosphere with the Cassini orbiter Ion Neutral Mass Spectrometer, Langmuir Probe and magnetometer observations during targeted flybys. Icarus, 2012, 219, 534-555.	2.5	15
64	Science goals and mission concept for the future exploration of Titan and Enceladus. Planetary and Space Science, 2014, 104, 59-77.	1.7	15
65	LRO-LAMP detection of geologically young craters within lunar permanently shaded regions. Icarus, 2016, 273, 114-120.	2.5	15
66	The Fundamental Connections between the Solar System and Exoplanetary Science. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006643.	3.6	15
67	The source of heavy organics and aerosols in Titan's atmosphere. Proceedings of the International Astronomical Union, 2008, 4, 321-326.	0.0	14
68	An empirical approach to modeling ion production rates in Titan's ionosphere II: Ion production rates on the nightside. Journal of Geophysical Research: Space Physics, 2015, 120, 1281-1298.	2.4	14
69	Key Atmospheric Signatures for Identifying the Source Reservoirs of Volatiles in Uranus and Neptune. Space Science Reviews, 2020, 216, 1.	8.1	14
70	Investigation of the force balance in the Titan ionosphere: Cassini T5 flyby model/data comparisons. Icarus, 2010, 210, 867-880.	2.5	13
71	Comparative planetology of the history of nitrogen isotopes in the atmospheres of Titan and Mars. Icarus, 2015, 254, 259-261.	2.5	13
72	Tracing the Origins of the Ice Giants Through Noble Gas Isotopic Composition. Space Science Reviews, 2020, 216, 1.	8.1	13

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73	Exogenic origin for the volatiles sampled by the Lunar CRater Observation and Sensing Satellite impact. Nature Communications, 2022, 13, 642.	12.8	13
74	The observed composition of ions outflowing from Titan. Geophysical Research Letters, 2012, 39, .	4.0	12
75	The Case for a New Frontiersâ€"Class Uranus Orbiter: System Science at an Underexplored and Unique World with a Mid-scale Mission. Planetary Science Journal, 2022, 3, 58.	3.6	12
76	SUBSURFACE CHARACTERIZATION OF 67P/CHURYUMOVâ€"GERASIMENKOâ€™S ABYDOS SITE. Astrophysical Journal, 2016, 822, 98.	4.5	11
77	Noble Gas Abundance Ratios Indicate the Agglomeration of 67P/Churyumovâ€"Gerasimenko from Warmed-up Ice. Astrophysical Journal Letters, 2018, 865, L11.	8.3	11
78	The Far Ultraviolet Wavelength Dependence of the Lunar Phase Curve as Seen by LRO LAMP. Journal of Geophysical Research E: Planets, 2018, 123, 2550-2563.	3.6	11
79	Nitrogen Atmospheres of the Icy Bodies in the Solar System. Space Science Reviews, 2020, 216, 1.	8.1	11
80	Science Goals and Mission Objectives for the Future Exploration of Ice Giants Systems: A Horizon 2061 Perspective. Space Science Reviews, 2021, 217, 1.	8.1	11
81	Neptune Odyssey: A Flagship Concept for the Exploration of the Neptuneâ€"Triton System. Planetary Science Journal, 2021, 2, 184.	3.6	11
82	Modeling Plutoâ€™s minimum pressure: Implications for haze production. Icarus, 2021, 356, 114070.	2.5	10
83	The Volatile Carbon-to-oxygen Ratio as a Tracer for the Formation Locations of Interstellar Comets. Planetary Science Journal, 2022, 3, 150.	3.6	10
84	EFFECTS OF NITROGEN PHOTOABSORPTION CROSS SECTION RESOLUTION ON MINOR SPECIES VERTICAL PROFILES IN TITANâ€™S UPPER ATMOSPHERE. Astrophysical Journal Letters, 2015, 801, L14.	8.3	9
85	Tritonâ€™s Variable Interaction With Neptuneâ€™s Magnetospheric Plasma. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029740.	2.4	9
86	Hierarchical Bayesian Atmospheric Retrieval Modeling for Population Studies of Exoplanet Atmospheres: A Case Study on the Habitable Zone. Astronomical Journal, 2022, 163, 140.	4.7	9
87	Comparisons of Cassini flybys of the Titan magnetospheric interaction with an MHD model: Evidence for organized behavior at high altitudes. Icarus, 2012, 217, 43-54.	2.5	8
88	Space Weather at Comet 67P/Churyumovâ€"Gerasimenko Before its Perihelion. Earth, Moon and Planets, 2016, 117, 1-22.	0.6	8
89	Comparison of neutral outgassing of comet 67P/Churyumov-Gerasimenko inbound and outbound beyond 3 AU from ROSINA/DFMS. Astronomy and Astrophysics, 2019, 630, A30.	5.1	8
90	Determining the origin of the building blocks of the Ice Giants based on analogue measurements from comets. Monthly Notices of the Royal Astronomical Society, 2020, 491, 488-494.	4.4	8

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91	Escape and evolution of Titanâ€™s N2 atmosphere constrained by 14N/15N isotope ratios. Monthly Notices of the Royal Astronomical Society, 2020, 500, 2020-2035.	4.4	8
92	Transmission Spectroscopy of the Earthâ€“Sun System to Inform the Search for Extrasolar Life. Planetary Science Journal, 2021, 2, 140.	3.6	8
93	Dual storage and release of molecular oxygen in comet 67P/Churyumovâ€“Gerasimenko. Nature Astronomy, 2022, 6, 724-730.	10.1	8
94	A qualitative study of the retention and release of volatile gases in JSC-1A lunar soil simulant at room temperature under ultrahigh vacuum (UHV) conditions. Icarus, 2015, 255, 30-43.	2.5	7
95	Performance evaluation of a prototype multi-bounce time-of-flight mass spectrometer in linear mode and applications in space science. Planetary and Space Science, 2015, 117, 436-443.	1.7	7
96	THE ROLE OF NITROGEN IN TITANâ€™S UPPER ATMOSPHERIC HYDROCARBON CHEMISTRY OVER THE SOLAR CYCLE. Astrophysical Journal, 2016, 823, 163.	4.5	6
97	First in-situ detection of the cometary ammonium ion NH$_4^{+}$ (protonated ammonia NH) Tj ETQq1 1 0.784314 rgBT /Overlock 1 Society, 0, , stw3370.	4.4	6
98	FUV Observations of the Inner Coma of 46P/Wirtanen. Planetary Science Journal, 2021, 2, 8.	3.6	6
99	Two years of solar wind and pickup ion measurements at comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S262-S267.	4.4	5
100	An Examination of Several Discrete Lunar Nearside Photometric Anomalies Observed in Lymanâ€Î± Maps. Journal of Geophysical Research E: Planets, 2019, 124, 294-315.	3.6	5
101	In Situ exploration of the giant planets. Experimental Astronomy, 2022, 54, 975-1013.	3.7	5
102	LRO/LAMP observations of the lunar helium exosphere: constraints on thermal accommodation and outgassing rate. Monthly Notices of the Royal Astronomical Society, 2021, 501, 4438-4451.	4.4	5
103	Retrieving Exoplanet Atmospheres Using Planetary Infrared Excess: Prospects for the Night Side of WASP-43 b and Other Hot Jupiters. Astrophysical Journal Letters, 2021, 921, L4.	8.3	5
104	Science goals and new mission concepts for future exploration of Titanâ€™s atmosphere, geology and habitability: titan POlar scout/orbitEr and in situ lake lander and DrONe explorer (POSEIDON). Experimental Astronomy, 2022, 54, 911-973.	3.7	5
105	Isotopic constraints on the source of Pluto×³s nitrogen and the history of atmospheric escape. Planetary and Space Science, 2016, 130, 104-109.	1.7	4
106	Influence of collisions on ion dynamics in the inner comae of four comets. Astronomy and Astrophysics, 2019, 630, A48.	5.1	4
107	The Role of Atmospheric Exchange in Falseâ€Positive Biosignature Detection. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	4
108	A prototype mass spectrometer for <i>in situ</i> analysis of cave atmospheres. Review of Scientific Instruments, 2012, 83, 105116.	1.3	3

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109	Comets as Tracers of Solar System Formation and Evolution. Space Science Reviews, 2015, 197, 5-7.	8.1	3
110	Photoionization Modeling of Titanâ€™s Dayside Ionosphere. Astrophysical Journal Letters, 2017, 850, L26.	8.3	3
111	Farâ€UV Observations of Lunar Rayed Craters with LROâ€LAMP. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006269.	3.6	3
112	Uncertainty for calculating transport on Titan: A probabilistic description of bimolecular diffusion parameters. Planetary and Space Science, 2015, 117, 377-384.	1.7	2
113	Recent Advancements and Motivations of Simulated Pluto Experiments. Space Science Reviews, 2018, 214, 1.	8.1	2
114	Looking Back is Looking Forward: The Need for Retrospective Solar System Observations in Advance of Exoplanet Retrievals. , 2021, 53, .		1
115	The Value of a Dual Anonymous System for Reducing Bias in Reviews of Planetary Research and Analysis Proposals and Scientific Papers. , 2021, 53, .		1
116	The Science Case for Io Exploration. , 2021, 53, .		1
117	Lunar Volatiles and Solar System Science. , 2021, 53, .		1
118	On the Utility of Transmission Color Analysis i: Differentiating Super-Earths and Sub-Neptunes. Astronomical Journal, 2021, 162, 168.	4.7	1
119	Yardang. , 2014, , 1-10.		0
120	Yardang. , 2015, , 2339-2347.		0
121	Planetary and Astrobiology Blank Papers: Science White Papers Cancelled or Downscaled Due to Direct Impact of COVID-19 and National-scale Civil Action. , 2021, 53, .		0
122	The Science Case for a Titan Flagship-class Orbiter with Probes. , 2021, 53, .		0
123	Recommendations for Addressing Priority Io Science in the Next Decade. , 2021, 53, .		0
124	Potential Ocean Worlds. , 2021, 53, .		0
125	Plateau Degradation Landforms. , 2014, , 1-10.		0
126	Plateau Degradation Landforms. , 2015, , 1587-1595.		0

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127	Comets as Tracers of Solar System Formation and Evolution. , 2017, , 5-7.		0
128	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. , 2017, , 297-342.		0
129	TRAPPIST-1h as an Exo-Titan. I. The Role of Assumptions about Atmospheric Parameters in Understanding an Exoplanet Atmosphere. Astrophysical Journal, 2022, 930, 73.	4.5	0