John R Spencer

List of Publications by Year
in descending order

119 papers	7,092 citations	57758 44 h-index	62596 80 g-index
122 all docs	122 docs citations	122 times ranked	3610 citing authors

#	Article	IF	Citations
1	Cassini Encounters Enceladus: Background and the Discovery of a South Polar Hot Spot. Science, 2006, 311, 1401-1405.	12.6	481
2	The Pluto system: Initial results from its exploration by New Horizons. Science, 2015, 350, aad1815.	12.6	407
3	Exploring The Saturn System In The Thermal Infrared: The Composite Infrared Spectrometer. Space Science Reviews, 2004, 115, 169-297.	8.1	275
4	Systematic biases in radiometric diameter determinations. Icarus, 1989, 78, 337-354.	2.5	267
5	Surface compositions across Pluto and Charon. Science, 2016, 351, aad9189.	12.6	242
6	Shear heating as the origin of the plumes and heat flux on Enceladus. Nature, 2007, 447, 289-291.	27.8	232
7	Temperatures on Europa from Galileo Photopolarimeter-Radiometer: Nighttime Thermal Anomalies. Science, 1999, 284, 1514-1516.	12.6	226
8	The geology of Pluto and Charon through the eyes of New Horizons. Science, 2016, 351, 1284-1293.	12.6	219
9	The atmosphere of Pluto as observed by New Horizons. Science, 2016, 351, aad8866.	12.6	201
10	High-Temperature Silicate Volcanism on Jupiter's Moon Io. , 1998, 281, 87-90.		198
11	Discovery of Gaseous S2 in Io's Pele Plume. Science, 2000, 288, 1208-1210.	12.6	193
12	Temperatures, Winds, and Composition in the Saturnian System. Science, 2005, 307, 1247-1251.	12.6	184
13	A rough-surface thermophysical model for airless planets. Icarus, 1990, 83, 27-38.	2.5	158
14	A Clathrate Reservoir Hypothesis for Enceladus' South Polar Plume. Science, 2006, 314, 1764-1766.	12.6	156
15	High heat flow from Enceladus' south polar region measured using 10â€“600 cm^{â^'1}Cassini/CIRS data. Journal of Geophysical Research, 2011, 116, .	3.3	145
16	Enceladus: An Active Ice World in the Saturn System. Annual Review of Earth and Planetary Sciences, 2013, 41, 693-717.	11.0	142
17	Ralph: A Visible/Infrared Imager for the New Horizons Pluto/Kuiper Belt Mission. Space Science Reviews, 2008, 140, 129-154.	8.1	141
18	Mass Movement and Landform Degradation on the Icy Galilean Satellites: Results of the Galileo Nominal Mission. Icarus, 1999, 140, 294-312.	2.5	128

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19	Impact craters on Pluto and Charon indicate a deficit of small Kuiper belt objects. Science, 2019, 363, 955-959.	12.6	116
20	Initial results from the New Horizons exploration of 2014 MU ₆₉ , a small Kuiper Belt object. Science, 2019, 364, .	12.6	113
21	Io Volcanism Seen by New Horizons: A Major Eruption of the Tvashtar Volcano. Science, 2007, 318, 240-243.	12.6	104
22	Convection in a volatile nitrogen-ice-rich layer drives Plutoâ€™s geological vigour. Nature, 2016, 534, 82-85.	27.8	102
23	Thermal segregation of water ice on the Galilean satellites. Icarus, 1987, 69, 297-313.	2.5	99
24	The influence of thermal inertia on temperatures and frost stability on Triton. Icarus, 1992, 99, 261-272.	2.5	82
25	Formation of Iapetusâ€™ Extreme Albedo Dichotomy by Exogenically Triggered Thermal Ice Migration. Science, 2010, 327, 432-435.	12.6	81
26	Dunes on Pluto. Science, 2018, 360, 992-997.	12.6	81
27	The solar nebula origin of (486958) Arrokoth, a primordial contact binary in the Kuiper Belt. Science, 2020, 367, .	12.6	79
28	The geology and geophysics of Kuiper Belt object (486958) Arrokoth. Science, 2020, 367, .	12.6	76
29	Basins, fractures and volcanoes: Global cartography and topography of Pluto from New Horizons. Icarus, 2018, 314, 400-433.	2.5	75
30	New Horizons: Anticipated Scientific Investigations atÂtheÂPluto System. Space Science Reviews, 2008, 140, 93-127.	8.1	74
31	The temperature and width of an active fissure on Enceladus measured with Cassini VIMS during the 14 April 2012 South Pole flyover. Icarus, 2013, 226, 1128-1137.	2.5	69
32	Enceladus: An Active Cryovolcanic Satellite. , 2009, , 683-724.		65
33	Color, composition, and thermal environment of Kuiper Belt object (486958) Arrokoth. Science, 2020, 367, .	12.6	64
34	Plutoâ€™s interaction with its space environment: Solar wind, energetic particles, and dust. Science, 2016, 351, aad9045.	12.6	60
35	Interstellar Pickup Ion Observations to 38 au. Astrophysical Journal, Supplement Series, 2017, 233, 8.	7.7	59
36	Craters of the Pluto-Charon system. Icarus, 2017, 287, 187-206.	2.5	59

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37	Endogenic heat from Enceladus' south polar fractures: New observations, and models of conductive surface heating. Icarus, 2009, 199, 189-196.	2.5	55
38	The orbit, mass, size, albedo, and density of (65489) Ceto/Phorcys: A tidally-evolved binary Centaur. Icarus, 2007, 191, 286-297.	2.5	54
39	Lucy Mission to the Trojan Asteroids: Science Goals. Planetary Science Journal, 2021, 2, 171.	3.6	54
40	Violent silicate volcanism on Io in 1996. Geophysical Research Letters, 1997, 24, 2455-2458.	4.0	53
41	Geological mapping of Sputnik Planitia on Pluto. Icarus, 2017, 287, 261-286.	2.5	52
42	Sublimation as a landform-shaping process on Pluto. Icarus, 2017, 287, 320-333.	2.5	51
43	Energetic Particles in the Jovian Magnetotail. Science, 2007, 318, 220-222.	12.6	50
44	Ground-based observations of volcanism on Io in 1999 and early 2000. Journal of Geophysical Research, 2001, 106, 33129-33139.	3.3	47
45	Bladed Terrain on Pluto: Possible origins and evolution. Icarus, 2018, 300, 129-144.	2.5	47
46	Recent cryovolcanism in Virgil Fossae on Pluto. Icarus, 2019, 330, 155-168.	2.5	45
47	Galileo PPR observations of Europa: Hotspot detection limits and surface thermal properties. Icarus, 2010, 210, 763-769.	2.5	44
48	The formation of Charonâ€™s red poles from seasonally cold-trapped volatiles. Nature, 2016, 539, 65-68.	27.8	44
49	Enceladus Plume Structure and Time Variability: Comparison of Cassini Observations. Astrobiology, 2017, 17, 926-940.	3.0	43
50	Present and past glaciation on Pluto. Icarus, 2017, 287, 287-300.	2.5	43
51	New Horizons Observations of the Cosmic Optical Background. Astrophysical Journal, 2021, 906, 77.	4.5	42
52	Io's Atmospheric Response to Eclipse: UV Aurorae Observations. Science, 2007, 318, 237-240.	12.6	41
53	High-precision Orbit Fitting and Uncertainty Analysis of (486958) 2014 MU69. Astronomical Journal, 2018, 156, 20.	4.7	39
54	The New Horizons Kuiper Belt Extended Mission. Space Science Reviews, 2018, 214, 1.	8.1	35

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55	The rapid formation of Sputnik Planitia early in Plutoâ€™s history. Nature, 2016, 540, 97-99.	27.8	34
56	Anomalous Flux in the Cosmic Optical Background Detected with New Horizons Observations. Astrophysical Journal Letters, 2022, 927, L8.	8.3	32
57	Charon tectonics. Icarus, 2017, 287, 161-174.	2.5	30
58	Geology before Pluto: Pre-encounter considerations. Icarus, 2015, 246, 65-81.	2.5	29
59	Breaking up is hard to do: Global cartography and topography of Pluto's mid-sized icy Moon Charon from New Horizons. Icarus, 2018, 315, 124-145.	2.5	29
60	Simulation of Ioâ€™s auroral emission: Constraints on the atmosphere in eclipse. Icarus, 2011, 214, 495-509.	2.5	26
61	The nature and origin of Charon's smooth plains. Icarus, 2019, 323, 16-32.	2.5	26
62	The Global Color of Pluto from New Horizons. Astronomical Journal, 2017, 154, 258.	4.7	25
63	Pluto: Pits and mantles on uplands north and east of Sputnik Planitia. Icarus, 2017, 293, 218-230.	2.5	24
64	Close Cassini flybys of Saturnâ€™s ring moons Pan, Daphnis, Atlas, Pandora, and Epimetheus. Science, 2019, 364, .	12.6	24
65	Collecting amino acids in the Enceladus plume. International Journal of Astrobiology, 2019, 18, 47-59.	1.6	24
66	Lucy Mission to the Trojan Asteroids: Instrumentation and Encounter Concept of Operations. Planetary Science Journal, 2021, 2, 172.	3.6	21
67	Surface, Subsurface and Atmosphere Exchanges onÂtheÂSatellites ofÂtheÂOuter Solar System. Space Science Reviews, 2010, 153, 375-410.	8.1	19
68	The Lymanâ€Î± Sky Background as Observed by New Horizons. Geophysical Research Letters, 2018, 45, 8022-8028.	4.0	19
69	The Geophysical Environment of (486958) Arrokothâ€”A Small Kuiper Belt Object Explored by New Horizons. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	18
70	Sublimation-driven erosion on Hyperion: Topographic analysis and landform simulation model tests. Icarus, 2012, 220, 268-276.	2.5	17
71	Characterizing Ioâ€™s Pele, Tvashtar and Pillan plumes: Lessons learned from Hubble. Icarus, 2012, 218, 378-405.	2.5	16
72	Spatially resolved HST/STIS observations of Ioâ€™s dayside equatorial atmosphere. Icarus, 2015, 248, 165-189.	2.5	16

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73	Io: Eruptions at Pillan, and the time evolution of Pele and Pillan from 1996 to 2015. Icarus, 2016, 264, 198-212.	2.5	15
74	Suprathermal Ions in the Outer Heliosphere. Astrophysical Journal, 2019, 876, 46.	4.5	15
75	Influence of Solar Disturbances on Galactic Cosmic Rays in the Solar Wind, Heliosheath, and Local Interstellar Medium: Advanced Composition Explorer, New Horizons, and Voyager Observations. Astrophysical Journal, 2020, 905, 69.	4.5	15
76	Large-scale cryovolcanic resurfacing on Pluto. Nature Communications, 2022, 13, 1542.	12.8	15
77	A Predicted Dearth of Majority Hypervolatile Ices in Oort Cloud Comets. Planetary Science Journal, 2022, 3, 112.	3.6	15
78	Numerical modeling of endogenic thermal anomalies on Europa. Icarus, 2008, 195, 378-385.	2.5	14
79	Great Expectations: Plans and Predictions for New Horizons Encounter With Kuiper Belt Object 2014 MU₆₉ (â€œUltima Thuleâ€). Geophysical Research Letters, 2018, 45, 8111-8120.	4.0	14
80	Phase Curves from the Kuiper Belt: Photometric Properties of Distant Kuiper Belt Objects Observed by New Horizons. Astronomical Journal, 2019, 158, 123.	4.7	14
81	Student Dust Counter: Status report at 38 AU. Icarus, 2019, 321, 116-125.	2.5	14
82	In-flight Performance and Calibration of the LOng Range Reconnaissance Imager (LORRI) for the New Horizons Mission. Publications of the Astronomical Society of the Pacific, 2020, 132, 035003.	3.1	14
83	Photometry of Kuiper belt object (486958) Arrokoth from New Horizons LORRI. Icarus, 2021, 356, 113723.	2.5	13
84	Detection of a Satellite of the Trojan Asteroid (3548) Eurybatesâ€”A Lucy Mission Target. Planetary Science Journal, 2020, 1, 44.	3.6	13
85	Io's hot spots in the near-infrared detected by LEISA during the New Horizons flyby. Journal of Geophysical Research E: Planets, 2014, 119, 2222-2238.	3.6	11
86	The New Horizons and Hubble Space Telescope search for rings, dust, and debris in the Pluto-Charon system. Icarus, 2018, 301, 155-172.	2.5	11
87	The Global Distribution of Active Ionian Volcanoes and Implications for Tidal Heating Models. Astronomical Journal, 2018, 156, 207.	4.7	11
88	Geologic Landforms and Chronostratigraphic History of Charon as Revealed by a Hemispheric Geologic Map. Journal of Geophysical Research E: Planets, 2019, 124, 155-174.	3.6	11
89	Inside Enceladus. Nature, 2007, 445, 376-377.	27.8	10
90	Determining the Alpha to Proton Density Ratio for the New Horizons Solar Wind Observations. Astrophysical Journal, 2018, 866, 85.	4.5	10

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91	The Orbit and Density of the Jupiter Trojan Satellite System Eurybatesâ€“Queta. Planetary Science Journal, 2021, 2, 170.	3.6	10
92	The Diverse Shapes of Dwarf Planet and Large KBO Phase Curves Observed from New Horizons. Planetary Science Journal, 2022, 3, 95.	3.6	10
93	Investigation of Charon's Craters With Abrupt Terminus Ejecta, Comparisons With Other Icy Bodies, and Formation Implications. Journal of Geophysical Research E: Planets, 2018, 123, 20-36.	3.6	9
94	The Pluto system after New Horizons. , 2020, , 271-288.		9
95	A Near-surface Temperature Model of Arrokoth. Planetary Science Journal, 2022, 3, 110.	3.6	9
96	Dual-telescope multi-channel thermal-infrared radiometer for outer planet fly-by missions. Acta Astronautica, 2016, 128, 628-639.	3.2	7
97	Persephone: A Pluto-system Orbiter and Kuiper Belt Explorer. Planetary Science Journal, 2021, 2, 75.	3.6	7
98	Triton: Topography and Geology of a Probable Ocean World with Comparison to Pluto and Charon. Remote Sensing, 2021, 13, 3476.	4.0	7
99	New Horizons Detection of the Local Galactic Lyman-Î± Background. Astronomical Journal, 2021, 162, 241.	4.7	7
100	Phase Curves of Nix and Hydra from the New Horizons Imaging Cameras. Astrophysical Journal Letters, 2018, 852, L35.	8.3	6
101	Enceladus with a grain of salt. Nature, 2009, 459, 1067-1068.	27.8	5
102	Origins of pits and troughs and degradation on a small primitive planetesimal in the Kuiper Belt: high-resolution topography of (486958) Arrokoth (aka 2014 MU69) from New Horizons. Icarus, 2021, 356, 113834.	2.5	5
103	Pluto's Interaction With Energetic Heliospheric Ions. Journal of Geophysical Research: Space Physics, 2019, 124, 7413-7424.	2.4	4
104	Maps of Tethysâ€™ thermophysical properties. Icarus, 2019, 321, 705-714.	2.5	4
105	Charon: A Brief History of Tides. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006449.	3.6	4
106	High-resolution Search for Kuiper Belt Object Binaries from New Horizons. Planetary Science Journal, 2022, 3, 46.	3.6	4
107	Detectability of thermal signatures associated with active formation of â€˜chaos terrainâ€™ on Europa. Earth and Planetary Science Letters, 2013, 384, 37-41.	4.4	3
108	Collisions of Small Kuiper Belt Objects With (486958) Arrokoth: Implications for Its Spin Evolution and Bulk Density. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006961.	3.6	3

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109	Orbits and Occultation Opportunities of 15 TNOs Observed by New Horizons. Planetary Science Journal, 2022, 3, 23.	3.6	3
110	Upper Limits on the Escape of Volatiles from (486958) Arrokoth Using New Horizons Alice Ultraviolet Spectrograph Observations. Planetary Science Journal, 2022, 3, 111.	3.6	3
111	Detection of Radio Thermal Emission from the Kuiper Belt Object (486958) Arrokoth during the New Horizons Encounter. Planetary Science Journal, 2022, 3, 109.	3.6	3
112	Snow Crash: Compaction Craters on (486958) Arrokoth and Other Small KBOs, With Implications. Geophysical Research Letters, 2022, 49, .	4.0	3
113	Limits on Dione's Activity Using Cassini/CIRS Data. Geophysical Research Letters, 2018, 45, 5876-5898.	4.0	2
114	Charonâ€™s Far Side Geomorphology. Planetary Science Journal, 2021, 2, 141.	3.6	2
115	The Dark Side of Pluto. Planetary Science Journal, 2021, 2, 214.	3.6	2
116	Probing the Hill Sphere of (486958) 2014 MU₆₉. II. Hubble Space Telescope Fine Guidance Sensors Observations during the 2018 August 4 Stellar Occultation. Astronomical Journal, 2019, 158, 168.	4.7	1
117	Plans for and initial results from the exploration of the Kuiper belt by New Horizons. , 2020, , 379-394.		1
118	Surface, Subsurface and Atmosphere Exchanges onÂtheÂSatellites ofÂtheÂOuter Solar System. Space Sciences Series of ISSI, 2010, , 373-408.	0.0	1
119	COMMISSION 16: PHYSICAL STUDY OF PLANETS AND SATELLITES. Proceedings of the International Astronomical Union, 2008, 4, 163-168.	0.0	0