

Patrick N Peplowski

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1031338/publications.pdf>

Version: 2024-02-01

86
papers

2,932
citations

185998

28
h-index

174990

52
g-index

89
all docs

89
docs citations

89
times ranked

2078
citing authors

#	ARTICLE	IF	CITATIONS
1	Radioactive Elements on Mercury's Surface from MESSENGER: Implications for the Planet's Formation and Evolution. <i>Science</i> , 2011, 333, 1850-1852.	6.0	233
2	The distribution and origin of smooth plains on Mercury. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 891-907.	1.5	193
3	Evidence for Water Ice Near Mercury's North Pole from MESSENGER Neutron Spectrometer Measurements. <i>Science</i> , 2013, 339, 292-296.	6.0	173
4	Evidence for geochemical terranes on Mercury: Global mapping of major elements with MESSENGER's X-Ray Spectrometer. <i>Earth and Planetary Science Letters</i> , 2015, 416, 109-120.	1.8	167
5	Major element abundances on the surface of Mercury: Results from the MESSENGER Gamma-Ray Spectrometer. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	146
6	Remote sensing evidence for an ancient carbon-bearing crust on Mercury. <i>Nature Geoscience</i> , 2016, 9, 273-276.	5.4	134
7	Mercury's Weather-Beaten Surface: Understanding Mercury in the Context of Lunar and Asteroidal Space Weathering Studies. <i>Space Science Reviews</i> , 2014, 181, 121-214.	3.7	108
8	Variations in the abundances of potassium and thorium on the surface of Mercury: Results from the MESSENGER Gamma-Ray Spectrometer. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	85
9	Enhanced sodium abundance in Mercury's north polar region revealed by the MESSENGER Gamma-Ray Spectrometer. <i>Icarus</i> , 2014, 228, 86-95.	1.1	85
10	Science Goals and Objectives for the Dragonfly Titan Rotorcraft Relocatable Lander. <i>Planetary Science Journal</i> , 2021, 2, 130.	1.5	80
11	Geochemistry, mineralogy, and petrology of boninitic and komatiitic rocks on the mercurian surface: Insights into the mercurian mantle. <i>Icarus</i> , 2017, 285, 155-168.	1.1	79
12	Geochemical terranes of Mercury's northern hemisphere as revealed by MESSENGER neutron measurements. <i>Icarus</i> , 2015, 253, 346-363.	1.1	74
13	Chlorine on the surface of Mercury: MESSENGER gamma-ray measurements and implications for the planet's formation and evolution. <i>Icarus</i> , 2015, 257, 417-427.	1.1	66
14	Observations, Meteorites, and Models: A Preflight Assessment of the Composition and Formation of (16) Psyche. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006296.	1.5	61
15	Constraints on the abundance of carbon in near-surface materials on Mercury: Results from the MESSENGER Gamma-Ray Spectrometer. <i>Planetary and Space Science</i> , 2015, 108, 98-107.	0.9	57
16	Evidence from MESSENGER for sulfur- and carbon-driven explosive volcanism on Mercury. <i>Geophysical Research Letters</i> , 2016, 43, 3653-3661.	1.5	57
17	Compositional variability on the surface of 4 Vesta revealed through γ measurements of high-energy gamma rays. <i>Meteoritics and Planetary Science</i> , 2013, 48, 2252-2270.	0.7	53
18	Olivine or impact melt: Nature of the "Orange" material on Vesta from Dawn. <i>Icarus</i> , 2013, 226, 1568-1594.	1.1	47

#	ARTICLE	IF	CITATIONS
19	Neutron absorption constraints on the composition of 4 Vesta. Meteoritics and Planetary Science, 2013, 48, 2211-2236.	0.7	47
20	The Chemical Composition of Mercury. , 2018, , 30-51.		43
21	Astrophysical Reaction Rate for the Neutron-Generator Reaction $C^{13}(\hat{1}\pm,n)O^{16}$ in Asymptotic Giant Branch Stars. Physical Review Letters, 2006, 97, 192701.	2.9	41
22	Global Distribution and Spectral Properties of Low-Reflectance Material on Mercury. Geophysical Research Letters, 2018, 45, 2945-2953.	1.5	41
23	Lowest $\frac{O}{Si}$ Ratio on Mercury: Evidence for Silicon Smelting? http://www.w3.org/1998/Math/MathML $\int_0^{\infty} \frac{dN}{dE} dE$ proton resonance in ^{28}Si . http://www.w3.org/1998/Math/MathML $\int_0^{\infty} \frac{dN}{dE} dE$	1.1	37
24	Comprehensive survey of energetic electron events in Mercury's magnetosphere with data from the MESSENGER Gamma-Ray and Neutron Spectrometer. Journal of Geophysical Research: Space Physics, 2015, 120, 2851-2876.	0.8	36
25	A Low O/Si Ratio on the Surface of Mercury: Evidence for Silicon Smelting?. Journal of Geophysical Research E: Planets, 2017, 122, 2053-2076.	1.5	36
26	Distribution of iron on Vesta. Meteoritics and Planetary Science, 2013, 48, 2237-2251.	0.7	35
27	Intense energetic electron flux enhancements in Mercury's magnetosphere: An integrated view with high-resolution observations from MESSENGER. Journal of Geophysical Research: Space Physics, 2016, 121, 2171-2184.	0.8	31
28	Hydrogen and major element concentrations on 433 Eros: Evidence for an L - or LL -chondrite-like surface composition. Meteoritics and Planetary Science, 2015, 50, 353-367.	0.7	30
29	Compositional terranes on Mercury: Information from fast neutrons. Icarus, 2017, 281, 32-45.	1.1	30
30	Constraints on Vesta's elemental composition: Fast neutron measurements by Dawn's gamma ray and neutron detector. Meteoritics and Planetary Science, 2013, 48, 2271-2288.	0.7	28
31	Current nuclear data needs for applications. Physical Review Research, 2022, 4, .	1.3	28
32	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.	1.1	26
33	Using HED meteorites to interpret neutron and gamma-ray data from asteroid 4 Vesta. Meteoritics and Planetary Science, 2015, 50, 1311-1337.	0.7	24
34	Aluminum abundance on the surface of Mercury: Application of a new background-reduction technique for the analysis of gamma-ray spectroscopy data. Journal of Geophysical Research, 2012, 117, .	3.3	23
35	The Engineering Radiation Monitor for the Radiation Belt Storm Probes Mission. Space Science Reviews, 2013, 179, 485-502.	3.7	22
36	Science operation plan of Phobos and Deimos from the MMX spacecraft. Earth, Planets and Space, 2021, 73, .	0.9	22

#	ARTICLE	IF	CITATIONS
37	<p> Li^{232}Th </p> <p> 6Th </p>	1.1	21
38	Bulk hydrogen abundances in the lunar highlands: Measurements from orbital neutron data. <i>Icarus</i> , 2015, 255, 127-134.	1.1	21
39	Galactic cosmic ray variations in the inner heliosphere from solar distances less than 0.5 AU: Measurements from the MESSENGER Neutron Spectrometer. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 7398-7406.	0.8	21
40	The Geochemical and Mineralogical Diversity of Mercury. , 2018, , 176-190.		21
41	Analysis of MESSENGER Gamma-Ray Spectrometer data from the Mercury flybys. <i>Planetary and Space Science</i> , 2011, 59, 1829-1841.	0.9	18
42	Space-based measurement of the neutron lifetime using data from the neutron spectrometer on NASA's MESSENGER mission. <i>Physical Review Research</i> , 2020, 2, .	1.3	17
43	<p> B^8 </p> <p> 8 </p>	1.1	15
44	Geochemistry of the lunar highlands as revealed by measurements of thermal neutrons. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 388-401.	1.5	15
45	The global elemental composition of 433 Eros: First results from the NEAR gamma-ray spectrometer orbital dataset. <i>Planetary and Space Science</i> , 2016, 134, 36-51.	0.9	15
46	Analytical Identification and Characterization of the Major Geochemical Terranes of Mercury's Northern Hemisphere. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 2414-2429.	1.5	15
47	<p> B^8 </p> <p> 7 </p> <p> Be^8 </p>	1.1	14
48	Chemically distinct regions of Venus's atmosphere revealed by measured N ₂ concentrations. <i>Nature Astronomy</i> , 2020, 4, 947-950.	4.2	14
49	Distinguishing the Origin of Asteroid (16) Psyche. <i>Space Science Reviews</i> , 2022, 218, 17.	3.7	13
50	Early Results From the Engineering Radiation Monitor (ERM) and Solar Cell Monitor on the Van Allen Probes Mission. <i>IEEE Transactions on Nuclear Science</i> , 2013, 60, 4053-4058.	1.2	12
51	RadFET Dosimeters in the Belt: the Van Allen Probes on Day 365. <i>IEEE Transactions on Nuclear Science</i> , 2014, 61, 948-954.	1.2	12
52	Detection and characterization of 0.5 MeV neutrons near Mercury: Evidence for a solar origin. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5150-5171.	0.8	12
53	The MESSENGER Gamma-Ray Spectrometer: Calibration and operations. <i>Icarus</i> , 2017, 288, 186-200.	1.1	12
54	New insights into the global composition of the lunar surface from high-energy gamma rays measured by Lunar Prospector. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 671-688.	1.5	11

#	ARTICLE	IF	CITATIONS
73	RADFET dosimeters in the belt: The Van Allen Probes on day 365. , 2013, , .		4
74	The 4 June 2011 neutron event at Mercury: A defense of the solar origin hypothesis. Journal of Geophysical Research: Space Physics, 2015, 120, 5284-5289.	0.8	4
75	Statistical Study of Mercury's Energetic Electron Events as Observed by the Gamma-Ray and Neutron Spectrometer Instrument Onboard MESSENGER. Journal of Geophysical Research: Space Physics, 2018, 123, 4961-4978.	0.8	4
76	MESSENGER Gamma Ray Spectrometer and Epithermal Neutron Hydrogen Data Reveal Compositional Differences Between Mercury's Hot and Cold Poles. Journal of Geophysical Research E: Planets, 2019, 124, 721-733.	1.5	4
77	Deciphering Redox State for a Metal-Rich World. Space Science Reviews, 2022, 218, 6.	3.7	4
78	MEGANE investigations of Phobos and the Small Body Mapping Tool. Earth, Planets and Space, 2021, 73, 217.	0.9	4
79	Characterizing near-surface elemental layering on Mars using gamma-ray spectroscopy: A proof-of-principle experiment. Nuclear Instruments & Methods in Physics Research B, 2018, 415, 89-99.	0.6	3
80	Applications of nuclear resonance fluorescence. , 2010, , .		2
81	Operation of a ^3He proportional counter in the Ganymede radiation environment. Planetary and Space Science, 2012, 61, 46-52.	0.9	2
82	Long-duration neutron production by nonflaring transients in the solar corona. Journal of Geophysical Research: Space Physics, 2015, 120, 8247-8266.	0.8	2
83	Science Goals and Mission Concept for a Landed Investigation of Mercury. Planetary Science Journal, 2022, 3, 68.	1.5	2
84	Thermal neutron activation of a CeBr_3 gamma-ray sensor. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1029, 166396.	0.7	1
85	Pulsed neutron generator "gamma ray spectrometer measurements of venus elemental composition. , 2016, , .		0
86	Ex luna, scientia: lunar occultation as a paradigm for nuclear astrophysics. , 2016, , .		0