Thomas R Watters

List of Publications by Year
in descending order

67 papers	5,383 citations	87843 38 h-index	106281 65 g-index
67 all docs	67 docs citations	67 times ranked	1970 citing authors

#	Article	IF	Citations
1	Subsurface Radar Sounding of the South Polar Layered Deposits of Mars. Science, 2007, 316, 92-95.	6.0	330
2	Radar Soundings of the Subsurface of Mars. Science, 2005, 310, 1925-1928.	6.0	327
3	The Mercury Dual Imaging System on the MESSENGER Spacecraft. Space Science Reviews, 2007, 131, 247-338.	3.7	242
4	Flood Volcanism in the Northern High Latitudes of Mercury Revealed by MESSENGER. Science, 2011, 333, 1853-1856.	6.0	225
5	Compressional tectonism on Mars. Journal of Geophysical Research, 1993, 98, 17049-17060.	3.3	210
6	The Evolution of Mercuryâ€™s Crust: A Global Perspective from MESSENGER. Science, 2009, 324, 613-618.	6.0	194
7	The distribution and origin of smooth plains on Mercury. Journal of Geophysical Research E: Planets, 2013, 118, 891-907.	1.5	193
8	Wrinkle ridge assemblages on the terrestrial planets. Journal of Geophysical Research, 1988, 93, 10236-10254.	3.3	186
9	Mercuryâ€™s global contraction much greater than earlier estimates. Nature Geoscience, 2014, 7, 301-307.	5.4	181
10	Return to Mercury: A Global Perspective on MESSENGER's First Mercury Flyby. Science, 2008, 321, 59-62.	6.0	170
11	Volcanism on Mercury: Evidence from the First MESSENGER Flyby. Science, 2008, 321, 69-72.	6.0	169
12	Reflectance and Color Variations on Mercury: Regolith Processes and Compositional Heterogeneity. Science, 2008, 321, 66-69.	6.0	167
13	Radar Sounding of the Medusae Fossae Formation Mars: Equatorial Ice or Dry, Low-Density Deposits?. Science, 2007, 318, 1125-1128.	6.0	143
14	Geology of the Caloris Basin, Mercury: A View from MESSENGER. Science, 2008, 321, 73-76.	6.0	140
15	The tectonics of Mercury: The view after MESSENGER's first flyby. Earth and Planetary Science Letters, 2009, 285, 283-296.	1.8	135
16	Evidence of Recent Thrust Faulting on the Moon Revealed by the Lunar Reconnaissance Orbiter Camera. Science, 2010, 329, 936-940.	6.0	135
17	Topography of lobate scarps on Mercury: New constraints on the planet's contraction. Geology, 1998, 26, 991.	2.0	123
18	Evidence for Young Volcanism on Mercury from the Third MESSENGER Flyby. Science, 2010, 329, 668-671.	6.0	118

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19	Origin of periodically spaced wrinkle ridges on the Tharsis Plateau of Mars. Journal of Geophysical Research, 1991, 96, 15599-15616.	3.3	109
20	Thrust faults along the dichotomy boundary in the eastern hemisphere of Mars. Journal of Geophysical Research, 2003, 108, .	3.3	106
21	Shallow radar (SHARAD) sounding observations of the Medusae Fossae Formation, Mars. Icarus, 2009, 199, 295-302.	1.1	102
22	Forward mechanical modeling of the Amenthes Rupes Thrust Fault on Mars. Geophysical Research Letters, 2001, 28, 4659-4662.	1.5	99
23	Hemispheres Apart: The Crustal Dichotomy on Mars. Annual Review of Earth and Planetary Sciences, 2007, 35, 621-652.	4.6	83
24	Recent extensional tectonics on the Moon revealed by the Lunar Reconnaissance Orbiter Camera. Nature Geoscience, 2012, 5, 181-185.	5.4	83
25	The mechanical and thermal structure of Mercury's early lithosphere. Geophysical Research Letters, 2002, 29, 37-1.	1.5	79
26	Displacement-length relations of thrust faults associated with lobate scarps on Mercury and Mars: Comparison with terrestrial faults. Geophysical Research Letters, 2000, 27, 3659-3662.	1.5	75
27	Interpretation and analysis of planetary structures. Journal of Structural Geology, 2010, 32, 855-875.	1.0	71
28	Thrust faults and the global contraction of Mercury. Geophysical Research Letters, 2004, 31, .	1.5	70
29	Shallow seismic activity and young thrust faults on the Moon. Nature Geoscience, 2019, 12, 411-417.	5.4	64
30	Elastic dislocation modeling of wrinkle ridges on Mars. Icarus, 2004, 171, 284-294.	1.1	61
31	Stereo topographic models of Mercury after three MESSENGER flybys. Planetary and Space Science, 2011, 59, 1910-1917.	0.9	57
32	Global thrust faulting on the Moon and the influence of tidal stresses. Geology, 2015, 43, 851-854.	2.0	56
33	MARSIS radar sounder evidence of buried basins in the northern lowlands of Mars. Nature, 2006, 444, 905-908.	13.7	55
34	Emplacement and tectonic deformation of smooth plains in the Caloris basin, Mercury. Earth and Planetary Science Letters, 2009, 285, 309-319.	1.8	53
35	Stratigraphy of the Caloris basin, Mercury: Implications for volcanic history and basin impact melt. Icarus, 2015, 250, 413-429.	1.1	49
36	Evolution of the Rembrandt Impact Basin on Mercury. Science, 2009, 324, 618-621.	6.0	46

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37	The morphology of Mercuryâ€™s Caloris basin as seen in MESSENGER stereo topographic models. Icarus, 2010, 209, 230-238.	1.1	41
38	Duration of activity on lobateâ€scarp thrust faults on Mercury. Journal of Geophysical Research E: Planets, 2015, 120, 1751-1762.	1.5	41
39	How old are lunar lobate scarps? 1. Seismic resetting of crater size-frequency distributions. Icarus, 2018, 306, 225-242.	1.1	39
40	Radar and photoclinometric studies of wrinkle ridges on Mars. Journal of Geophysical Research, 1997, 102, 10889-10903.	3.3	37
41	Deformation associated with ghost craters and basins in volcanic smooth plains on Mercury: Strain analysis and implications for plains evolution. Journal of Geophysical Research, 2012, 117, .	3.3	37
42	Insights into the subsurface structure of the Caloris basin, Mercury, from assessments of mechanical layering and changes in longâ€wavelength topography. Journal of Geophysical Research E: Planets, 2013, 118, 2030-2044.	1.5	37
43	Extensional troughs in the Caloris Basin of Mercury: Evidence of lateral crustal flow. Geology, 2005, 33, 669.	2.0	34
44	System of tectonic features common to Earth, Mars, and Venus. Geology, 1992, 20, 609.	2.0	31
45	Recent tectonic activity on Mercury revealed by small thrust fault scarps. Nature Geoscience, 2016, 9, 743-747.	5.4	31
46	On the origin of graben and ridges within and near volcanically buried craters and basins in Mercury's northern plains. Journal of Geophysical Research, 2012, 117, .	3.3	30
47	Accommodation of lithospheric shortening on Mercury from altimetric profiles of ridges and lobate scarps measured during MESSENGER flybys 1 and 2. Icarus, 2010, 209, 247-255.	1.1	29
48	Distribution of largeâ€scale contractional tectonic landforms on Mercury: Implications for the origin of global stresses. Geophysical Research Letters, 2015, 42, 3755-3763.	1.5	29
49	Could Pantheon Fossae be the result of the Apollodorus crater-forming impact within the Caloris basin, Mercury?. Earth and Planetary Science Letters, 2009, 285, 320-327.	1.8	27
50	Small-scale lunar graben: Distribution, dimensions, and formation processes. Icarus, 2015, 252, 95-106.	1.1	21
51	Thrust faults and the near-surface strength of asteroid 433 Eros. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	20
52	Phase compensation of MARSIS subsurface sounding data and estimation of ionospheric properties: New insights from SHARAD results. Journal of Geophysical Research E: Planets, 2016, 121, 180-193.	1.5	18
53	Toward high-resolution global topography of Mercury from MESSENGER orbital stereo imaging: A prototype model for the H6 (Kuiper) quadrangle. Planetary and Space Science, 2017, 142, 26-37.	0.9	18
54	Geology of the Martian crustal dichotomy boundary: Age, modifications, and implications for modeling efforts. Journal of Geophysical Research, 2010, 115, .	3.3	16

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55	Wrinkle ridges on Mercury and the Moon within and outside of mascons. Icarus, 2019, 331, 226-237.	1.1	16
56	Dielectric Properties of the Medusae Fossae Formation and Implications for Ice Content. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006601.	1.5	15
57	The tectonics of Mercury. , 2009, , 15-80.		13
58	Lunar tectonics. , 2009, , 121-182.		13
59	Evidence for recent and ancient faulting at Mare Frigoris and implications for lunar tectonic evolution. Icarus, 2019, 326, 151-161.	1.1	13
60	Radar sounder evidence of thick, porous sediments in Meridiani Planum and implications for iceâ€filled deposits on Mars. Geophysical Research Letters, 2017, 44, 9208-9215.	1.5	12
61	A case for limited global contraction of Mercury. Communications Earth & Environment, 2021, 2, 9.	2.6	12
62	Provenance of Block Fields Along Lunar Wrinkle Ridges. Journal of Geophysical Research E: Planets, 2019, 124, 2970-2982.	1.5	10
63	Lunar Wrinkle Ridges and the Evolution of the Nearside Lithosphere. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	9
64	Faultâ€bound valley associated with the Rembrandt basin on Mercury. Geophysical Research Letters, 2016, 43, 11,536.	1.5	8
65	Mercury's Crustal Thickness and Contractional Strain. Geophysical Research Letters, 2021, 48, e2021GL093528.	1.5	7
66	The Lunar Geophysical Network Landing Sites Science Rationale. Planetary Science Journal, 2022, 3, 40.	1.5	7
67	Topography of nearside mare graben: Implications for dike-induced or passive extension formation. Icarus, 2021, 354, 114039.	1.1	6