Mark A Wieczorek

List of Publications by Year
in descending order

127	11,959	23567 58	27406 106
papers	citations	h-index	g-index

131	131	131	4374
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lithospheric Structure of Venusian Crustal Plateaus. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	15
2	The Psyche Topography and Geomorphology Investigation. Space Science Reviews, 2022, 218, 1.	8.1	4
3	Geodetic investigations of the mission concept MAGIC to reveal Callisto's internal structure. Acta Astronautica, 2022, 195, 68-76.	3.2	5
4	Distinguishing the Origin of Asteroid (16) Psyche. Space Science Reviews, 2022, 218, 17.	8.1	13
5	An autonomous lunar geophysical experiment package (ALGEP) for future space missions. Experimental Astronomy, 2022, 54, 617-640.	3.7	2
6	InSight Constraints on the Global Character of the Martian Crust. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	45
7	Statistical analysis of fireballs: Seismic signature survey. Publications of the Astronomical Society of Australia, 2021, 38, .	3.4	2
8	Magnetic Anomalies in Five Lunar Impact Basins: Implications for Impactor Trajectories and Inverse Modeling. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006668.	3.6	6
9	Seismic Efficiency for Simple Crater Formation in the Martian Top Crust Analog. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006662.	3.6	6
10	A New Largeâ€Scale Map of the Lunar Crustal Magnetic Field and Its Interpretation. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006667.	3.6	12
11	Impacts on the Moon: Analysis methods and size distribution of impactors. Planetary and Space Science, 2021, 200, 105201.	1.7	10
12	Seismic Velocity Variations in a 3D Martian Mantle: Implications for the InSight Measurements. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006755.	3.6	10
13	Thickness and structure of the martian crust from InSight seismic data. Science, 2021, 373, 438-443.	12.6	140
14	Depth of Martian Magnetization From Localized Power Spectrum Analysis. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006690.	3.6	8
15	The Composition of the South Polar Cap of Mars Derived From Orbital Data. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006730.	3.6	15
16	Large impact cratering during lunar magma ocean solidification. Nature Communications, 2021, 12, 5433.	12.8	16
17	Improving Constraints on Planetary Interiors With PPs Receiver Functions. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006983.	3.6	34
18	Numerical Simulations of the Apollo Sâ€IVB Artificial Impacts on the Moon. Earth and Space Science, 2021, 8, e2021EA001887.	2.6	7

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19	Highâ€Resolution Gravity Field Models from GRAIL Data and Implications for Models of the Density Structure of the Moon's Crust. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006086.	3.6	38
20	Impact cratering rate consistency test from ages of layered ejecta on Mars. Planetary and Space Science, 2020, 180, 104755.	1.7	16
21	Thickness of Lava Flows Within the Northern Smooth Plains on Mercury as Estimated by Partially Buried Craters. Geophysical Research Letters, 2020, 47, e2020GL090578.	4.0	4
22	Lunar Seismology: A Data and Instrumentation Review. Space Science Reviews, 2020, 216, 1.	8.1	59
23	Constraints on Thermal History of Mars From Depth of Pore Closure Below InSight. Geophysical Research Letters, 2020, 47, e2020GL088653.	4.0	21
24	The science mission of SpaceILâ€™s Beresheet lander. Planetary and Space Science, 2020, 194, 105115.	1.7	3
25	Observations, Meteorites, and Models: A Preflight Assessment of the Composition and Formation of (16) Psyche. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006296.	3.6	61
26	Flexure of the Lithosphere Beneath the North Polar Cap of Mars: Implications for Ice Composition and Heat Flow. Geophysical Research Letters, 2020, 47, e2019GL086746.	4.0	23
27	Crustal and time-varying magnetic fields at the InSight landing site on Mars. Nature Geoscience, 2020, 13, 199-204.	12.9	68
28	Crustal Porosity of Lunar Impact Basins. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006335.	3.6	11
29	Is the Lunar Magnetic Field Correlated With Gravity or topography?. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006274.	3.6	9
30	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	12.9	274
31	The Gravitational Signature of Martian Volcanoes. Journal of Geophysical Research E: Planets, 2019, 124, 2054-2086.	3.6	30
32	Lunar Seismology: An Update on Interior Structure Models. Space Science Reviews, 2019, 215, 1.	8.1	60
33	Thickness of Lunar Mare Basalts: New Results Based on Modeling the Degradation of Partially Buried Craters. Journal of Geophysical Research E: Planets, 2019, 124, 2430-2459.	3.6	36
34	SEIS: Insightâ€™s Seismic Experiment for Internal Structure of Mars. Space Science Reviews, 2019, 215, 12.	8.1	238
35	Density distribution of asteroid 25143 Itokawa based on smooth terrain shape. Planetary and Space Science, 2019, 174, 32-42.	1.7	18
36	Hydrostatic Interfaces in Bodies With Nonhydrostatic Lithospheres. Journal of Geophysical Research E: Planets, 2019, 124, 1410-1432.	3.6	17

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37	Pre-mission InSights on the Interior of Mars. Space Science Reviews, 2019, 215, 1.	8.1	85
38	Isostatic Compensation of the Lunar Highlands. Journal of Geophysical Research E: Planets, 2018, 123, 646-665.	3.6	10
39	The timeline of the lunar bombardment: Revisited. Icarus, 2018, 305, 262-276.	2.5	186
40	Ring faults and ring dikes around the Orientale basin on the Moon. Icarus, 2018, 310, 1-20.	2.5	31
41	Strength, Depth, and Geometry of Magnetic Sources in the Crust of the Moon From Localized Power Spectrum Analysis. Journal of Geophysical Research E: Planets, 2018, 123, 291-316.	3.6	39
42	Olivine-bearing lithologies on the Moon: Constraints on origins and transport mechanisms from M3 spectroscopy, radiative transfer modeling, and GRAIL crustal thickness. Icarus, 2018, 300, 287-304.	2.5	27
43	Distribution of Radioactive Heat Sources and Thermal History of the Moon. Journal of Geophysical Research E: Planets, 2018, 123, 3144-3166.	3.6	55
44	The Thermal State and Interior Structure of Mars. Geophysical Research Letters, 2018, 45, 12,198.	4.0	69
45	SHTools: Tools for Working with Spherical Harmonics. Geochemistry, Geophysics, Geosystems, 2018, 19, 2574-2592.	2.5	155
46	Testing the axial dipole hypothesis for the Moon by modeling the direction of crustal magnetization. Journal of Geophysical Research E: Planets, 2017, 122, 383-399.	3.6	27
47	Planned Products of the Mars Structure Service for the InSight Mission to Mars. Space Science Reviews, 2017, 211, 611-650.	8.1	80
48	Simulations of Seismic Wave Propagation on Mars. Space Science Reviews, 2017, 211, 571-594.	8.1	19
49	Fundamental relations of mineral specific magnetic carriers for paleointensity determination. Physics of the Earth and Planetary Interiors, 2017, 272, 44-49.	1.9	25
50	Iron Abundances in Lunar Impact Basin Melt Sheets From Orbital Magnetic Field Data. Journal of Geophysical Research E: Planets, 2017, 122, 2429-2444.	3.6	26
51	How large are present-day heat flux variations across the surface of Mars?. Journal of Geophysical Research E: Planets, 2016, 121, 2386-2403.	3.6	81
52	Thicknesses of mare basalts on the Moon from gravity and topography. Journal of Geophysical Research E: Planets, 2016, 121, 854-870.	3.6	51
53	GRAIL, LLR, and LOLA constraints on the interior structure of the Moon. Geophysical Research Letters, 2016, 43, 8365-8375.	4.0	57
54	The forced precession of the Moon's inner core. Journal of Geophysical Research E: Planets, 2016, 121, 1264-1292.	3.6	18

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55	Subsurface morphology and scaling of lunar impact basins. Journal of Geophysical Research E: Planets, 2016, 121, 1695-1712.	3.6	37
56	Formation of the Orientale lunar multiring basin. Science, 2016, 354, 441-444.	12.6	78
57	Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory Mission. Science, 2016, 354, 438-441.	12.6	38
58	The fractured Moon: Production and saturation of porosity in the lunar highlands from impact cratering. Geophysical Research Letters, 2015, 42, 6939-6944.	4.0	63
59	Mercury's lowâ€degree geoid and topography controlled by insolationâ€driven elastic deformation. Geophysical Research Letters, 2015, 42, 7327-7335.	4.0	16
60	Gravity and Topography of the Terrestrial Planets. , 2015, , 153-193.		102
61	Gravitational signatures of lunar floor-fractured craters. Earth and Planetary Science Letters, 2015, 424, 269-279.	4.4	26
62	Lunar impact basins revealed by Gravity Recovery and Interior Laboratory measurements. Science Advances, 2015, 1, e1500852.	10.3	173
63	Excavation of the lunar mantle by basin-forming impact events on the Moon. Earth and Planetary Science Letters, 2015, 409, 243-251.	4.4	64
64	Appreciation of Peer Reviewers for 2014. Journal of Geophysical Research E: Planets, 2015, 120, 359-361.	3.6	0
65	Thickness of the crust of Mercury from geoidâ€toâ€topography ratios. Geophysical Research Letters, 2015, 42, 1029-1038.	4.0	67
66	Lunar bulk chemical composition: a post-Gravity Recovery and Interior Laboratory reassessment. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130242.	3.4	70
67	A long-lived lunar dynamo powered by core crystallization. Earth and Planetary Science Letters, 2014, 401, 251-260.	4.4	105
68	GRAIL gravity constraints on the vertical and lateral density structure of the lunar crust. Geophysical Research Letters, 2014, 41, 5771-5777.	4.0	126
69	Effect of ray and speed perturbations on ionospheric tomography by overâ€theâ€horizon radar: A new method. Journal of Geophysical Research: Space Physics, 2014, 119, 7841-7857.	2.4	6
70	The formation of lunar mascon basins from impact to contemporary form. Journal of Geophysical Research E: Planets, 2014, 119, 2378-2397.	3.6	57
71	Petrological constraints on the density of the Martian crust. Journal of Geophysical Research E: Planets, 2014, 119, 1707-1727.	3.6	91
72	Lunar interior properties from the GRAIL mission. Journal of Geophysical Research E: Planets, 2014, 119, 1546-1578.	3.6	185

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73	Asymmetric Distribution of Lunar Impact Basins Caused by Variations in Target Properties. Science, 2013, 342, 724-726.	12.6	103
74	Ancient Igneous Intrusions and Early Expansion of the Moon Revealed by GRAIL Gravity Gradiometry. Science, 2013, 339, 675-678.	12.6	177
75	Gravity Field of the Moon from the Gravity Recovery and Interior Laboratory (GRAIL) Mission. Science, 2013, 339, 668-671.	12.6	389
76	The Crust of the Moon as Seen by GRAIL. Science, 2013, 339, 671-675.	12.6	726
77	The Origin of Lunar Mascon Basins. Science, 2013, 340, 1552-1555.	12.6	174
78	Asymmetric thermal evolution of the Moon. Journal of Geophysical Research E: Planets, 2013, 118, 1435-1452.	3.6	193
79	An Impactor Origin for Lunar Magnetic Anomalies. Science, 2012, 335, 1212-1215.	12.6	112
80	Back to the Moon: The scientific rationale for resuming lunar surface exploration. Planetary and Space Science, 2012, 74, 3-14.	1.7	119
81	Geology, geochemistry, and geophysics of the Moon: Status of current understanding. Planetary and Space Science, 2012, 74, 15-41.	1.7	104
82	Mercuryâ€™s spinâ€“orbit resonance explained byÂinitial retrograde and subsequent synchronousÂrotation. Nature Geoscience, 2012, 5, 18-21.	12.9	56
83	Density and porosity of the lunar crust from gravity and topography. Journal of Geophysical Research, 2012, 117, .	3.3	73
84	Density and lithospheric structure at Tyrrhena Patera, Mars, from gravity and topography data. Icarus, 2012, 221, 43-52.	2.5	36
85	Lunar Netâ€”a proposal in response to an ESA M3 call in 2010 for a medium sized mission. Experimental Astronomy, 2012, 33, 587-644.	3.7	15
86	Farside explorer: unique science from a mission to the farside of the moon. Experimental Astronomy, 2012, 33, 529-585.	3.7	52
87	Regolith thickness over the lunar nearside: Results from Earth-based 70-cm Arecibo radar observations. Icarus, 2012, 218, 771-787.	2.5	108
88	The Chandrayaan-1 X-ray Spectrometer: First results. Planetary and Space Science, 2012, 60, 217-228.	1.7	28
89	An impact-driven dynamo for the early Moon. Nature, 2011, 479, 215-218.	27.8	144
90	Modeling polarimetric radar scattering from the lunar surface: Study on the effect of physical properties of the regolith layer. Journal of Geophysical Research, 2011, 116, .	3.3	67

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91	Nonuniform cratering of the Moon and a revised crater chronology of the inner Solar System. Icarus, 2011, 214, 1-20.	2.5	266
92	Lunar X-ray fluorescence observations by the Chandrayaan-1 X-ray Spectrometer (C1XS): Results from the nearside southern highlands. Icarus, 2011, 214, 53-66.	2.5	46
93	Structure and Formation of the Lunar Farside Highlands. Science, 2010, 330, 949-951.	12.6	45
94	LunarEXâ€”a proposal to cosmic vision. Experimental Astronomy, 2009, 23, 711-740.	3.7	18
95	Did a large impact reorient the Moon?. Icarus, 2009, 200, 358-366.	2.5	36
96	The scientific rationale for the C1XS X-ray spectrometer on India's Chandrayaan-1 mission to the moon. Planetary and Space Science, 2009, 57, 725-734.	1.7	30
97	X-ray fluorescence observations of the moon by SMART-1/D-CIXS and the first detection of Ti KÎ± from the lunar surface. Planetary and Space Science, 2009, 57, 744-750.	1.7	46
98	The C1XS X-ray Spectrometer on Chandrayaan-1. Planetary and Space Science, 2009, 57, 717-724.	1.7	54
99	The Interior Structure of the Moon: What Does Geophysics Have to Say?. Elements, 2009, 5, 35-40.	0.5	25
100	Compositional variations of the lunar crust: Results from radiative transfer modeling of central peak spectra. Journal of Geophysical Research, 2009, 114, .	3.3	103
101	Constraints on the composition of the martian south polar cap from gravity and topography. Icarus, 2008, 196, 506-517.	2.5	89
102	Nonuniform cratering of the terrestrial planets. Icarus, 2008, 197, 291-306.	2.5	135
103	Gravity and Topography of the Terrestrial Planets. , 2007, , 165-206.		48
104	Crustal thickness of the Moon: New constraints from gravity inversions using polyhedral shape models. Icarus, 2007, 192, 150-166.	2.5	71
105	The D-CIXS X-ray spectrometer on the SMART-1 mission to the Moonâ€”First results. Planetary and Space Science, 2007, 55, 494-502.	1.7	41
106	The BepiColombo Laser Altimeter (BELA): Concept and baseline design. Planetary and Space Science, 2007, 55, 1398-1413.	1.7	80
107	Minimum-Variance Multitaper Spectral Estimation on the Sphere. Journal of Fourier Analysis and Applications, 2007, 13, 665-692.	1.0	124
108	Spatiospectral Concentration on a Sphere. SIAM Review, 2006, 48, 504-536.	9.5	285

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109	The Constitution and Structure of the Lunar Interior. Reviews in Mineralogy and Geochemistry, 2006, 60, 221-364.	4.8	413
110	Lateral variations of lunar crustal thickness from the Apollo seismic data set. Earth and Planetary Science Letters, 2006, 243, 1-14.	4.4	83
111	3. The Constitution and Structure of the Lunar Interior. , 2006, , 221-364.		51
112	4. Thermal and Magmatic Evolution of the Moon. , 2006, , 365-518.		70
113	Thermal and Magmatic Evolution of the Moon. Reviews in Mineralogy and Geochemistry, 2006, 60, 365-518.	4.8	372
114	Localized spectral analysis on the sphere. Geophysical Journal International, 2005, 162, 655-675.	2.4	223
115	Constraints on the Martian lithosphere from gravity and topography data. Journal of Geophysical Research, 2005, 110, .	3.3	122
116	Thickness of the Martian crust: Improved constraints from geoid-to-topography ratios. Journal of Geophysical Research, 2004, 109, .	3.3	205
117	Crustal structure of Mars from gravity and topography. Journal of Geophysical Research, 2004, 109, .	3.3	360
118	Correction to â€œLocalized gravity/topography admittance and correlation spectra on Mars: Implications for regional and global evolutionâ€• Journal of Geophysical Research, 2004, 109, .	3.3	151
119	Localized gravity/topography admittance and correlation spectra on Mars: Implications for regional and global evolution. Journal of Geophysical Research, 2002, 107, 19-1-19-25.	3.3	243
120	A Serenitatis origin for the Imbrian grooves and South Pole-Aitken thorium anomaly. Journal of Geophysical Research, 2001, 106, 27853-27864.	3.3	51
121	The composition and origin of the lunar crust: Constraints from central peaks and crustal thickness modeling. Geophysical Research Letters, 2001, 28, 4023-4026.	4.0	75
122	The role of magma buoyancy on the eruption of lunar basalts. Earth and Planetary Science Letters, 2001, 185, 71-83.	4.4	85
123	The â€œProcellarum KREEP Terraneâ€• Implications for mare volcanism and lunar evolution. Journal of Geophysical Research, 2000, 105, 20417-20430.	3.3	294
124	Major lunar crustal terranes: Surface expressions and crust-mantle origins. Journal of Geophysical Research, 2000, 105, 4197-4216.	3.3	719
125	Lunar Multiring Basins and the Cratering Process. Icarus, 1999, 139, 246-259.	2.5	188
126	Potential anomalies on a sphere: Applications to the thickness of the lunar crust. Journal of Geophysical Research, 1998, 103, 1715-1724.	3.3	285

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127	The structure and compensation of the lunar highland crust. Journal of Geophysical Research, 1997, 102, 10933-10943.	3.3	68