Robert E Grimm

List of Publications by Year
in descending order

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72 papers	3,529 citations	109321 35 h-index	133252 59 g-index
72 all docs	72 docs citations	72 times ranked	2785 citing authors

#	Article	IF	Citations
1	Impact craters and Venus resurfacing history. Journal of Geophysical Research, 1992, 97, 15923-15948.	3.3	303
2	Venus tectonics: An overview of Magellan observations. Journal of Geophysical Research, 1992, 97, 13199-13255.	3.3	278
3	Water and the thermal evolution of carbonaceous chondrite parent bodies. Icarus, 1989, 82, 244-280.	2.5	276
4	Iron meteorites as remnants of planetesimals formed in the terrestrial planet region. Nature, 2006, 439, 821-824.	27.8	249
5	Heliocentric Zoning of the Asteroid Belt by Aluminum-26 Heating. Science, 1993, 259, 653-655.	12.6	217
6	New observations of martian southern mid-latitude recurring slope lineae (RSL) imply formation by freshwater subsurface flows. Icarus, 2014, 233, 328-341.	2.5	117
7	Water budgets of martian recurring slope lineae. Icarus, 2014, 233, 316-327.	2.5	103
8	Rheological constraints on martian landslides. Icarus, 2003, 163, 347-362.	2.5	79
9	Groundwater-controlled valley networks and the decline of surface runoff on early Mars. Journal of Geophysical Research, 2005, 110, .	3.3	77
10	Tessera deformation and the contemporaneous thermal state of the plateau highlands, Venus. Earth and Planetary Science Letters, 1997, 147, 1-10.	4.4	73
11	Radar attenuation and temperature within the Greenland Ice Sheet. Journal of Geophysical Research F: Earth Surface, 2015, 120, 983-1008.	2.8	72
12	Absorption and scattering in ground-penetrating radar: Analysis of the Bishop Tuff. Journal of Geophysical Research, 2006, 111, .	3.3	67
13	Thermal constraints on the early history of the H-chondrite parent body reconsidered. Geochimica Et Cosmochimica Acta, 2010, 74, 5410-5423.	3.9	65
14	Penecontemporaneous metamorphism, fragmentation, and reassembly of ordinary chondrite parent bodies. Journal of Geophysical Research, 1985, 90, 2022-2028.	3.3	64
15	Low-Frequency Electrical Properties of Iceâ^'Silicate Mixtures. Journal of Physical Chemistry B, 2010, 114, 6065-6073.	2.6	62
16	Observations and modeling of northern mid-latitude recurring slope lineae (RSL) suggest recharge by a present-day martian briny aquifer. Icarus, 2016, 265, 125-138.	2.5	62
17	The Deep Structure of Venusian Plateau Highlands. Icarus, 1994, 112, 89-103.	2.5	61
18	Shapes of Venusian â€œpancakeâ€•domes imply episodic emplacement and silicic composition. Geophysical Research Letters, 1993, 20, 261-264.	4.0	56

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19	Recent deformation rates on Venus. Journal of Geophysical Research, 1994, 99, 23163-23171.	3.3	54
20	Multiple flooding events in Martian outflow channels. Journal of Geophysical Research, 2008, 113, .	3.3	53
21	Farside explorer: unique science from a mission to the farside of the moon. Experimental Astronomy, 2012, 33, 529-585.	3.7	52
22	Characteristics of the numerous and widespread recurring slope lineae (RSL) in Valles Marineris, Mars. Icarus, 2017, 285, 195-210.	2.5	51
23	Low-Frequency Electrical Properties of Polycrystalline Saline Ice and Salt Hydrates. Journal of Physical Chemistry B, 2008, 112, 15382-15390.	2.6	49
24	Ground-penetrating radar sounding in mafic lava flows: Assessing attenuation and scattering losses in Mars-analog volcanic terrains. Journal of Geophysical Research, 2006, 111, .	3.3	48
25	Geophysical constraints on the lunar Procellarum KREEP Terrane. Journal of Geophysical Research E: Planets, 2013, 118, 768-778.	3.6	47
26	Tectonics of Artemis Chasma: A Venusian "Plate" Boundary. Icarus, 1995, 117, 219-249.	2.5	45
27	The role of acids in electrical conduction through ice. Journal of Geophysical Research F: Earth Surface, 2013, 118, 1-16.	2.8	45
28	Limits on modes of lithospheric heat transport on Venus from impact crater density. Geophysical Research Letters, 1987, 14, 538-541.	4.0	43
29	On the secular evolution of groundwater on Mars. Geophysical Research Letters, 2009, 36, .	4.0	43
30	Controls on Martian hydrothermal systems: Application to valley network and magnetic anomaly formation. Journal of Geophysical Research, 2002, 107, 1-1.	3.3	42
31	Radar penetrates only the youngest geological units on Mars. Journal of Geophysical Research, 2011, 116, .	3.3	41
32	Dielectric signatures of adsorbed and salty liquid water at the Phoenix landing site, Mars. Journal of Geophysical Research, 2011, 116, .	3.3	41
33	On the secular retention of ground water and ice on Mars. Journal of Geophysical Research E: Planets, 2017, 122, 94-109.	3.6	41
34	Regionally compartmented groundwater flow on Mars. Journal of Geophysical Research, 2009, 114, .	3.3	38
35	Recent Tectonic and Lithospheric Thermal Evolution of Venus. Icarus, 1999, 139, 40-48.	2.5	37
36	Low-frequency electromagnetic exploration for groundwater on Mars. Journal of Geophysical Research, 2002, 107, 1-1.	3.3	37

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37	Lithospheric rheology and flexure at Artemis Chasma, Venus. Journal of Geophysical Research, 1996, 101, 12697-12708.	3.3	34
38	Two pulses of seasonal activity in martian southern mid-latitude recurring slope lineae (RSL). Icarus, 2018, 302, 126-133.	2.5	32
39	Detection and analysis of naturally fractured gas reservoirs: Multiazimuth seismic surveys in the Wind River basin, Wyoming. Geophysics, 1999, 64, 1277-1292.	2.6	26
40	Evaluation of wet and dry recurring slope lineae (RSL) formation mechanisms based on quantitative mapping of RSL in Garni Crater, Valles Marineris, Mars. Icarus, 2020, 335, 113420.	2.5	26
41	Tectonic tests of proposed polar wander paths for Mars and the Moon. Icarus, 1986, 65, 110-121.	2.5	25
42	Tests of crustal divergence models for Aphrodite Terra, Venus. Journal of Geophysical Research, 1989, 94, 12103-12131.	3.3	25
43	Next-generation electromagnetic sounding of the Moon. Advances in Space Research, 2012, 50, 1687-1701.	2.6	25
44	The Potential for Lithoautotrophic Life on Mars: Application to Shallow Interfacial Water Environments. Astrobiology, 2007, 7, 342-354.	3.0	24
45	The 2010 European Venus Explorer (EVE) mission proposal. Experimental Astronomy, 2012, 33, 305-335.	3.7	20
46	Field Test of Detection and Characterisation of Subsurface Ice using Broadband Spectral-Induced Polarisation. Permafrost and Periglacial Processes, 2015, 26, 28-38.	3.4	20
47	Low-frequency radar sounding investigations of the North Amargosa Desert, Nevada: A potential analog of conductive subsurface environments on Mars. Journal of Geophysical Research, 2006, 111, .	3.3	16
48	New analysis of the Apollo 17 surface electrical properties experiment. Icarus, 2018, 314, 389-399.	2.5	15
49	Triaxial Modeling and Target Classification of Multichannel, Multicomponent EM Data for UXO Discrimination. Journal of Environmental and Engineering Geophysics, 2003, 8, 239-250.	0.5	14
50	Dual-mode, Fluxgate-Induction Sensor for UXO Detection and Discrimination. Journal of Environmental and Engineering Geophysics, 2010, 15, 51-64.	0.5	13
51	Direct thermal effects of the Hadean bombardment did not limit early subsurface habitability. Earth and Planetary Science Letters, 2018, 485, 1-8.	4.4	13
52	Floor subsidence and rebound of large Venus craters. Journal of Geophysical Research, 1996, 101, 26057-26067.	3.3	12
53	A timeâ€“domain electromagnetic sounder for detection and characterization of groundwater on Mars. Planetary and Space Science, 2009, 57, 1268-1281.	1.7	11
54	Dielectric signatures and evolution of glacier ice. Journal of Glaciology, 2015, 61, 1159-1170.	2.2	11

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55	Electrical response of ammonium-rich water ice. Annals of Glaciology, 2013, 54, 21-26.	1.4	8
56	The Isostatic State of Mead Crater. Icarus, 1994, 112, 117-129.	2.5	7
57	A comparison of time domain electromagnetic and surface nuclear magnetic resonance sounding for subsurface water on Mars. Journal of Geophysical Research, 2003, 108, .	3.3	7
58	Radar investigations of planetary and terrestrial environments. Journal of Geophysical Research, 2006, 111, .	3.3	7
59	Aerial electromagnetic sounding of the lithosphere of Venus. Icarus, 2012, 217, 462-473.	2.5	7
60	Radio reflection imaging of asteroid and comet interiors I: Acquisition and imaging theory. Advances in Space Research, 2015, 55, 2149-2165.	2.6	7
61	Feasibility of characterizing subsurface brines on Ceres by electromagnetic sounding. Icarus, 2021, 362, 114424.	2.5	7
62	Effects of acquisition geometry, largeâ€scale structure, and regional anisotropy on AVOA: An example from the Wind River basin. , 1997, , .		7
63	Tectonic activity on Venus. Nature, 1988, 331, 305-306.	27.8	5
64	Radio reflection imaging of asteroid and comet interiors II: Results and recommendations. Advances in Space Research, 2015, 55, 2166-2176.	2.6	5
65	Timing and Distribution of Single-Layered Ejecta Craters Imply Sporadic Preservation of Tropical Subsurface Ice on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 131-144.	3.6	4
66	Evaluation of grainflow mechanisms for martian recurring slope lineae (RSL). Icarus, 2021, 369, 114648.	2.5	3
67	Comment on â€œSubsurface water detection on Mars by astronauts using a seismic refraction method: Tests during a manned Mars simulation,â€•by V. Pletser et al.. Acta Astronautica, 2009, 64, 654-655.	3.2	2
68	On conductive ground: Analysis of â€œBistatic sounding of the deep subsurface with ground penetrating radar â˜ experimental validationâ€•by V. Ciarletti et al.. Planetary and Space Science, 2017, 139, 51-56.	1.7	2
69	On the electrical properties of meridianiite and implications for radar sounding of icy satellites. Earth and Planetary Science Letters, 2019, 520, 34-39.	4.4	1
70	Comment on â€œTerrestrial spreading centers under Venus conditions: Evaluation of a crustal spreading model for western Aphrodite Terraâ€•by C. Sotin, D.A. Senske, J.W. Head and E.M. Parmentier. Earth and Planetary Science Letters, 1991, 104, 114-115.	4.4	0
71	Correction to â€œGround-penetrating radar sounding in mafic lava flows: Assessing attenuation and scattering losses in Mars-analog volcanic terrainsâ€• Journal of Geophysical Research, 2006, 111, .	3.3	0
72	Low-frequency electromagnetic methods for planetary subsurface exploration. , 2013, , .		0