Morten Bo Madsen

List of Publications by Year
in descending order

120	10,141	44069 48	32842 100
papers	citations	h-index	g-index

122	122	122	5038
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
2	The Opportunity Rover's Athena Science Investigation at Meridiani Planum, Mars. Science, 2004, 306, 1698-1703.	12.6	507
3	H ₂ O at the Phoenix Landing Site. Science, 2009, 325, 58-61.	12.6	500
4	The Spirit Rover's Athena Science Investigation at Gusev Crater, Mars. Science, 2004, 305, 794-799.	12.6	404
5	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
6	An integrated view of the chemistry and mineralogy of martian soils. Nature, 2005, 436, 49-54.	27.8	348
7	A new interpretation of MÃ¶ssbauer spectra of microcrystalline goethite: â€œSuper-ferromagnetismâ€•or â€œsuper-spin-glassâ€•behaviour?. Journal of Magnetism and Magnetic Materials, 1983, 40, 163-174.	2.3	338
8	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
9	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
10	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	12.6	280
11	Transient liquid water and water activity at Gale crater on Mars. Nature Geoscience, 2015, 8, 357-361.	12.9	277
12	Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder. Journal of Geophysical Research, 2000, 105, 1721-1755.	3.3	274
13	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
14	Overview of the Spirit Mars Exploration Rover Mission to Gusev Crater: Landing site to Backstay Rock in the Columbia Hills. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	238
15	Athena Mars rover science investigation. Journal of Geophysical Research, 2003, 108, .	3.3	233
16	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
17	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
18	Pancam Multispectral Imaging Results from the Spirit Rover at Gusev Crater. Science, 2004, 305, 800-806.	12.6	153

#	Article	IF	Citations
19	Overview of the Opportunity Mars Exploration Rover Mission to Meridiani Planum: Eagle Crater to Purgatory Ripple. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	149
20	Evidence from Opportunity's Microscopic Imager for Water on Meridiani Planum. Science, 2004, 306, 1727-1730.	12.6	146
21	Nature and origin of the hematite-bearing plains of Terra Meridiani based on analyses of orbital and Mars Exploration rover data sets. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	144
22	Possible physical and thermodynamical evidence for liquid water at the Phoenix landing site. Journal of Geophysical Research, 2009, 114, .	3.3	137
23	Pancam Multispectral Imaging Results from the Opportunity Rover at Meridiani Planum. Science, 2004, 306, 1703-1709.	12.6	135
24	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
25	ChemCam activities and discoveries during the nominal mission of the Mars Science Laboratory in Gale crater, Mars. Journal of Analytical Atomic Spectrometry, 2016, 31, 863-889.	3.0	134
26	Rock Abrasion Tool: Mars Exploration Rover mission. Journal of Geophysical Research, 2003, 108, .	3.3	131
27	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. Science, 2004, 305, 824-826.	12.6	130
28	The imager for Mars Pathfinder experiment. Journal of Geophysical Research, 1997, 102, 4003-4025.	3.3	128
29	Indication of drier periods on Mars from the chemistry and mineralogy of atmospheric dust. Nature, 2005, 436, 62-65.	27.8	125
30	Overview of the Mars Pathfinder Mission: Launch through landing, surface operations, data sets, and science results. Journal of Geophysical Research, 1999, 104, 8523-8553.	3.3	121
31	Convective vortices and dust devils at the Phoenix Mars mission landing site. Journal of Geophysical Research, 2010, 115, .	3.3	118
32	The Mars Science Laboratory Curiosity rover Mastcam instruments: Preflight and inâ€flight calibration, validation, and data archiving. Earth and Space Science, 2017, 4, 396-452.	2.6	113
33	Magnetic Properties Experiments on the Mars Pathfinder Lander: Preliminary Results. Science, 1997, 278, 1768-1770.	12.6	104
34	Spirit Mars Rover Mission to the Columbia Hills, Gusev Crater: Mission overview and selected results from the Cumberland Ridge to Home Plate. Journal of Geophysical Research, 2008, 113, .	3.3	99
35	Wind-Related Processes Detected by the Spirit Rover at Gusev Crater, Mars. Science, 2004, 305, 810-813.	12.6	94
36	Winds at the Phoenix landing site. Journal of Geophysical Research, 2010, 115, .	3.3	89

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37	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
38	The magnetic properties experiments on Mars Pathfinder. Journal of Geophysical Research, 1999, 104, 8761-8779.	3.3	85
39	Magnetic Properties Experiments on the Mars Exploration Rover Spirit at Gusev Crater. Science, 2004, 305, 827-829.	12.6	77
40	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. Space Science Reviews, 2021, 217, 24.	8.1	76
41	A study of Fe-B and Fe-Co-B alloy particles produced by reduction with borohydride. Journal of Physics Condensed Matter, 1989, 1, 8199-8208.	1.8	72
42	MAHLI at the Rocknest sand shadow: Science and scienceâ€enabling activities. Journal of Geophysical Research E: Planets, 2013, 118, 2338-2360.	3.6	67
43	Nickel on Mars: Constraints on meteoritic material at the surface. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	65
44	Iceâ€vapor equilibrium fractionation factor of hydrogen and oxygen isotopes: Experimental investigations and implications for stable water isotope studies. Rapid Communications in Mass Spectrometry, 2013, 27, 2149-2158.	1.5	65
45	Overview of the Microscopic Imager Investigation during Spirit's first 450 sols in Gusev crater. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	64
46	Magnetic Properties Experiments on the Mars Exploration Rover mission. Journal of Geophysical Research, 2003, 108, .	3.3	55
47	Mossbauer studies of ultrafine iron-containing particles on a carbon support. Journal of Physics Condensed Matter, 1992, 4, 6555-6568.	1.8	51
48	Quantification of the dry history of the Martian soil inferred from in situ microscopy. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	50
49	Dust deposition on the decks of the Mars Exploration Rovers: 10â€‰years of dust dynamics on the Panoramic Camera calibration targets. Earth and Space Science, 2015, 2, 144-172.	2.6	49
50	Chemistry and texture of the rocks at Rocknest, Gale Crater: Evidence for sedimentary origin and diagenetic alteration. Journal of Geophysical Research E: Planets, 2014, 119, 2109-2131.	3.6	48
51	Characteristics of pebbleâ€and cobbleâ€sized clasts along the Curiosity rover traverse from Bradbury Landing to Rocknest. Journal of Geophysical Research E: Planets, 2013, 118, 2361-2380.	3.6	44
52	SuperCam Calibration Targets: Design and Development. Space Science Reviews, 2020, 216, 138.	8.1	44
53	Magnetic properties of ferrihydrite. Hyperfine Interactions, 1986, 27, 329-332.	0.5	40
54	Titanomaghemite in magnetic soils on Earth and Mars. Journal of Geophysical Research, 1990, 95, 14423-14425.	3.3	40

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55	Martian Eolian Dust Probed by ChemCam. Geophysical Research Letters, 2018, 45, 10,968.	4.0	40
56	Microscopy analysis of soils at the Phoenix landing site, Mars: Classification of soil particles and description of their optical and magnetic properties. Journal of Geophysical Research, 2010, 115, .	3.3	38
57	Magnetic domain structures and stray fields of individual elongated magnetite grains revealed by magnetic force microscopy (MFM). Physics of the Earth and Planetary Interiors, 2004, 141, 121-129.	1.9	36
58	Effect of Heating on Microcrystalline Synthetic Goethite. Clays and Clay Minerals, 1986, 34, 17-24.	1.3	35
59	Superparamagnetic component in the Orgueil meteorite and MÃ¶ssbauer spectroscopy studies in applied magnetic fields. Nature, 1986, 321, 501-503.	27.8	33
60	Magnetic properties of feroxyhyte (?-FeOOH). Physics and Chemistry of Minerals, 1995, 22, 333.	0.8	31
61	Overview of the magnetic properties experiments on the Mars Exploration Rovers. Journal of Geophysical Research, 2009, 114, .	3.3	31
62	MÃ¶ssbauer spectroscopy on the surface of Mars. Why?. Hyperfine Interactions, 1992, 68, 83-94.	0.5	29
63	Telltale wind indicator for the Mars Phoenix lander. Journal of Geophysical Research, 2008, 113, .	3.3	27
64	Factors affecting the electrification of wind-driven dust studied with laboratory simulations. Planetary and Space Science, 2012, 60, 328-335.	1.7	27
65	Radiometric Calibration Targets for the Mastcam-Z Camera on the Mars 2020 Rover Mission. Space Science Reviews, 2020, 216, 1.	8.1	27
66	The Spirit Rover's Athena Science Investigation at Gusev Crater, Mars. Science, 2004, 305, 794-799.	12.6	27
67	Decoupling of magnetically interacting crystallites of goethite. Hyperfine Interactions, 1986, 28, 549-552.	0.5	25
68	Magnetic enhancement on the surface of Mars?. Journal of Geophysical Research, 2000, 105, 1819-1827.	3.3	25
69	Magnetic and optical properties of airborne dust and settling rates of dust at the Phoenix landing site. Journal of Geophysical Research, 2010, 115, .	3.3	25
70	Iron-containing weathering products of basalt in a cold, dry climate. Chemical Geology, 1995, 122, 109-119.	3.3	24
71	Preliminary analysis of the MER magnetic properties experiment using a computational fluid dynamics model. Planetary and Space Science, 2006, 54, 28-44.	1.7	23
72	A study of microcrystals of synthetic feroxyhite (Î´â€²FeOOH). Surface Science, 1985, 156, 328-334.	1.9	22

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73	Simulation of the Martian dust aerosol at low wind speeds. Journal of Geophysical Research, 2002, 107, 16-1-16-8.	3.3	22
74	Maghemite in Icelandic basalts. Mineralogical Magazine, 1992, 56, 185-199.	1.4	20
75	Instruments for the Magnetic Properties Experiments on Mars Pathfinder. Planetary and Space Science, 1998, 46, 449-459.	1.7	18
76	An Optimized Calibration Procedure for Determining Elemental Ratios Using Laser-Induced Breakdown Spectroscopy. Analytical Chemistry, 2013, 85, 1492-1500.	6.5	18
77	MÃ¶ssbauer spectroscopy showing large-scale inhomogeneity in the presumed martian meteorite Zagami. Physica Scripta, 1992, 46, 94-96.	2.5	17
78	Magnetic properties experiments and the Surface Stereo Imager calibration target onboard the Mars Phoenix 2007 Lander: Design, calibration, and science goals. Journal of Geophysical Research, 2008, 113, .	3.3	17
79	Lattice locations and properties of Fe in Co/Fe co-implanted ZnO. Applied Physics Letters, 2012, 100, 042109.	3.3	17
80	Superparamagnetic amorphous Fe1â^'x C x alloy particles in a ferrofluid. Hyperfine Interactions, 1989, 51, 1071-1077.	0.5	16
81	MÃ¶ssbauer spectroscopy of magnetic minerals in basalt on Earth and Mars. Hyperfine Interactions, 2008, 182, 87-101.	0.5	15
82	Evidence for microcrystallinity in large particles of goethite. Surface Science, 1985, 156, 249-255.	1.9	14
83	Asymmetric doublet in MÃ¶ssbauer spectra of superparamagnetic goethite. Hyperfine Interactions, 1988, 42, 1059-1062.	0.5	13
84	Superparamagnetism in primitive meteorites. Hyperfine Interactions, 1988, 41, 827-830.	0.5	12
85	Titanium and the magnetic phase on Mars. Hyperfine Interactions, 1995, 95, 291-304.	0.5	11
86	Surface magnetism in ultrafine Î±-Fe particles. Journal of Magnetism and Magnetic Materials, 1992, 104-107, 1695-1696.	2.3	10
87	Search for magnetic minerals in Martian rocks: Overview of the Rock Abrasion Tool (RAT) magnet investigation on Spirit and Opportunity. Journal of Geophysical Research, 2008, 113, .	3.3	10
88	A study of titanomagnetites in basaltic rocks from Nigeria. Physica Scripta, 1988, 38, 508-512.	2.5	9
89	On anomalously magnetic basalt lavas from Stardalur Iceland. Hyperfine Interactions, 1990, 57, 2209-2214.	0.5	9
90	Heated nontronite: Possible relations to the magnetic phase in the Martian soil. Hyperfine Interactions, 1994, 91, 529-533.	0.5	9

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91	Homogeneity assessment of the SuperCam calibration targets onboard rover perseverance. Analytica Chimica Acta, 2022, 1209, 339837.	5.4	9
92	New analysis of the MÃ¶ssbauer spectra of olivine basalt rocks from Gusev crater on Mars. Planetary and Space Science, 2009, 57, 640-645.	1.7	8
93	Search for ultraviolet luminescence of soil particles at the Phoenix landing site, Mars. Planetary and Space Science, 2012, 70, 134-147.	1.7	8
94	Photometric characterization of Lucideon and Avian Technologies color standards including application for calibration of the Mastcam-Z instrument on the Mars 2020 rover. Optical Engineering, 2019, 58, 1.	1.0	8
95	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. Science, 2004, 305, 824-826.	12.6	7
96	Extraterrestrial magnetite studied by MÃ¶ssbauer spectroscopy. Hyperfine Interactions, 1989, 50, 659-665.	0.5	6
97	A MÃ¶ssbauer study of an impactite from the Monturaqui crater. Hyperfine Interactions, 1992, 70, 965-968.	0.5	6
98	Magnetic properties of Martian surface materials. , 2008, , 366-380.		6
99	A study of the sump beaver's dental enamel. Hyperfine Interactions, 1986, 29, 1431-1434.	0.5	5
100	Device for measuring surface accumulation of dust: applications for future magnetic properties experiments on Mars. Planetary and Space Science, 2004, 52, 693-698.	1.7	5
101	Weathering of basalt in an arctic climate. Hyperfine Interactions, 1990, 57, 2269-2273.	0.5	4
102	Backscattering MÃ¶ssbauer spectroscopy of Martian dust. Hyperfine Interactions, 2006, 166, 523-527.	0.5	4
103	Correction to â€œMicroscopy analysis of soils at the Phoenix landing site, Mars: Classification of soil particles and description of their optical and magnetic propertiesâ€• Journal of Geophysical Research, 2010, 115, .	3.3	4
104	[Comment on â€œMartian soil simulant available for scientific, educational studyâ€¦] Caution advised on suitability of a Mars soil simulant. Eos, 1999, 80, 168.	0.1	3
105	Magnetic Properties Experiments on the Mars Polar Lander. Journal of Geophysical Research, 2001, 106, 17579-17587.	3.3	3
106	Analysis of magnetic dust layers on Mars by PIXE and XRF. X-Ray Spectrometry, 2005, 34, 359-362.	1.4	3
107	On the merits of conversion electron MÃ¶ssbauer spectroscopy in geosciences. Hyperfine Interactions, 2006, 166, 511-516.	0.5	3
108	Disordered chromite in the Martian meteorite Allan Hills 84001. Hyperfine Interactions, 2008, 186, 9-14.	0.5	3

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109	RAT magnet experiment on the Mars Exploration Rovers: Spirit and Opportunity beyond sol 500. Journal of Geophysical Research, 2011, 116, .	3.3	3
110	MÃ¶ssbauer spectroscopy of samples from the 2010 FimmvÃ¶rÃ°uhÃ¡ls/EyjafjallajÃ¶kull eruption. Hyperfine Interactions, 2014, 226, 601-612.	0.5	3
111	Application of external magnetic field to characterize magnetic oxides in the carbonaceous chondrite Orgueil. Hyperfine Interactions, 1994, 91, 589-593.	0.5	2
112	Transient liquid water and water activity at Gale crater on Mars. , 0, .		2
113	Comparison of magnetic particles in airborne dust on Mars and in the Harmattan dust from south of Sahara. Geografisk Tidsskrift, 2000, 100, 1-6.	0.6	1
114	Simulations of the magnetic properties experiment on Mars Exploration Rovers. Hyperfine Interactions, 2006, 166, 555-560.	0.5	1
115	Poster contributions. Hyperfine Interactions, 1989, 47-48, 433-589.	0.5	0
116	Magnetic properties experiments on future missions to Mars. Advances in Space Research, 1999, 23, 1875-1878.	2.6	0
117	An Instrument Anomaly in the Mars Exploration Rover Pancam 1,009â€nm Filter (R7): Characterization, Simulation, Correction, and Preliminary Verification. Earth and Space Science, 2019, 6, 96-115.	2.6	0
118	MÃ¶ssbauer spectroscopy of magnetic minerals in basalt on Earth and Mars. , 2008, , 87-101.		0
119	Backscattering MÃ¶ssbauer spectroscopy of Martian dust. , 2006, , 523-527.		0
120	Simulations of the magnetic properties experiment on Mars Exploration Rovers. , 2006, , 555-560.		0