Morten Bo Madsen

List of Publications by Year
in descending order

120 papers	10,141 citations	44069 48 h-index	32842 100 g-index
122 all docs	122 docs citations	122 times ranked	5038 citing authors

#	Article	IF	Citations
1	Homogeneity assessment of the SuperCam calibration targets onboard rover perseverance. Analytica Chimica Acta, 2022, 1209, 339837.	5.4	9
2	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. Space Science Reviews, 2021, 217, 24.	8.1	76
3	SuperCam Calibration Targets: Design and Development. Space Science Reviews, 2020, 216, 138.	8.1	44
4	Radiometric Calibration Targets for the Mastcam-Z Camera on the Mars 2020 Rover Mission. Space Science Reviews, 2020, 216, 1.	8.1	27
5	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
6	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
7	Martian Eolian Dust Probed by ChemCam. Geophysical Research Letters, 2018, 45, 10,968.	4.0	40
8	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
9	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
10	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
11	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
12	Transient liquid water and water activity at Gale crater on Mars. Nature Geoscience, 2015, 8, 357-361.	12.9	277
13	MÃ¶ssbauer spectroscopy of samples from the 2010 FimmvÃ¶rÃºhÃ¡ls/EyjafjallajÃ¶kull eruption. Hyperfine Interactions, 2014, 226, 601-612.	0.5	3
14	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
15	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
16	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
17	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
18	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

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19	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	12.6	280
20	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
21	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
22	An Optimized Calibration Procedure for Determining Elemental Ratios Using Laser-Induced Breakdown Spectroscopy. Analytical Chemistry, 2013, 85, 1492-1500.	6.5	18
23	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
24	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
25	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
26	MAHLI at the Rocknest sand shadow: Science and scienceâ€enabling activities. Journal of Geophysical Research E: Planets, 2013, 118, 2338-2360.	3.6	67
27	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
28	Lattice locations and properties of Fe in Co/Fe co-implanted ZnO. Applied Physics Letters, 2012, 100, 042109.	3.3	17
29	Search for ultraviolet luminescence of soil particles at the Phoenix landing site, Mars. Planetary and Space Science, 2012, 70, 134-147.	1.7	8
30	Factors affecting the electrification of wind-driven dust studied with laboratory simulations. Planetary and Space Science, 2012, 60, 328-335.	1.7	27
31	RAT magnet experiment on the Mars Exploration Rovers: Spirit and Opportunity beyond sol 500. Journal of Geophysical Research, 2011, 116, .	3.3	3
32	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
33	Winds at the Phoenix landing site. Journal of Geophysical Research, 2010, 115, .	3.3	89
34	Convective vortices and dust devils at the Phoenix Mars mission landing site. Journal of Geophysical Research, 2010, 115, .	3.3	118
35	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
36	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

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37	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
38	H ₂ O at the Phoenix Landing Site. Science, 2009, 325, 58-61.	12.6	500
39	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
40	Possible physical and thermodynamical evidence for liquid water at the Phoenix landing site. Journal of Geophysical Research, 2009, 114, .	3.3	137
41	Overview of the magnetic properties experiments on the Mars Exploration Rovers. Journal of Geophysical Research, 2009, 114, .	3.3	31
42	MÃ¶ssbauer spectroscopy of magnetic minerals in basalt on Earth and Mars. Hyperfine Interactions, 2008, 182, 87-101.	0.5	15
43	Disordered chromite in the Martian meteorite Allan Hills 84001. Hyperfine Interactions, 2008, 186, 9-14.	0.5	3
44	Telltale wind indicator for the Mars Phoenix lander. Journal of Geophysical Research, 2008, 113, .	3.3	27
45	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
46	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
47	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
48	Magnetic properties of Martian surface materials. , 2008, , 366-380.		6
49	MÃ¶ssbauer spectroscopy of magnetic minerals in basalt on Earth and Mars. , 2008, , 87-101.		0
50	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
51	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
52	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
53	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
54	Nickel on Mars: Constraints on meteoritic material at the surface. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	65

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55	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
56	On the merits of conversion electron MÃ¶ssbauer spectroscopy in geosciences. Hyperfine Interactions, 2006, 166, 511-516.	0.5	3
57	Backscattering MÃ¶ssbauer spectroscopy of Martian dust. Hyperfine Interactions, 2006, 166, 523-527.	0.5	4
58	Simulations of the magnetic properties experiment on Mars Exploration Rovers. Hyperfine Interactions, 2006, 166, 555-560.	0.5	1
59	Backscattering MÃ¶ssbauer spectroscopy of Martian dust. , 2006, , 523-527.		0
60	Simulations of the magnetic properties experiment on Mars Exploration Rovers. , 2006, , 555-560.		0
61	An integrated view of the chemistry and mineralogy of martian soils. Nature, 2005, 436, 49-54.	27.8	348
62	Indication of drier periods on Mars from the chemistry and mineralogy of atmospheric dust. Nature, 2005, 436, 62-65.	27.8	125
63	Analysis of magnetic dust layers on Mars by PIXE and XRF. X-Ray Spectrometry, 2005, 34, 359-362.	1.4	3
64	Wind-Related Processes Detected by the Spirit Rover at Gusev Crater, Mars. Science, 2004, 305, 810-813.	12.6	94
65	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. Science, 2004, 305, 824-826.	12.6	130
66	Evidence from Opportunity's Microscopic Imager for Water on Meridiani Planum. Science, 2004, 306, 1727-1730.	12.6	146
67	Pancam Multispectral Imaging Results from the Spirit Rover at Gusev Crater. Science, 2004, 305, 800-806.	12.6	153
68	Pancam Multispectral Imaging Results from the Opportunity Rover at Meridiani Planum. Science, 2004, 306, 1703-1709.	12.6	135
69	Magnetic Properties Experiments on the Mars Exploration Rover Spirit at Gusev Crater. Science, 2004, 305, 827-829.	12.6	77
70	The Spirit Rover's Athena Science Investigation at Gusev Crater, Mars. Science, 2004, 305, 794-799.	12.6	404
71	The Opportunity Rover's Athena Science Investigation at Meridiani Planum, Mars. Science, 2004, 306, 1698-1703.	12.6	507
72	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

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73	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
74	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. Science, 2004, 305, 824-826.	12.6	7
75	The Spirit Rover's Athena Science Investigation at Gusev Crater, Mars. Science, 2004, 305, 794-799.	12.6	27
76	Magnetic Properties Experiments on the Mars Exploration Rover mission. Journal of Geophysical Research, 2003, 108, .	3.3	55
77	Rock Abrasion Tool: Mars Exploration Rover mission. Journal of Geophysical Research, 2003, 108, .	3.3	131
78	Athena Mars rover science investigation. Journal of Geophysical Research, 2003, 108, .	3.3	233
79	Simulation of the Martian dust aerosol at low wind speeds. Journal of Geophysical Research, 2002, 107, 16-1-16-8.	3.3	22
80	Magnetic Properties Experiments on the Mars Polar Lander. Journal of Geophysical Research, 2001, 106, 17579-17587.	3.3	3
81	Magnetic enhancement on the surface of Mars?. Journal of Geophysical Research, 2000, 105, 1819-1827.	3.3	25
82	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
83	Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder. Journal of Geophysical Research, 2000, 105, 1721-1755.	3.3	274
84	Magnetic properties experiments on future missions to Mars. Advances in Space Research, 1999, 23, 1875-1878.	2.6	0
85	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
86	[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
87	The magnetic properties experiments on Mars Pathfinder. Journal of Geophysical Research, 1999, 104, 8761-8779.	3.3	85
88	Instruments for the Magnetic Properties Experiments on Mars Pathfinder. Planetary and Space Science, 1998, 46, 449-459.	1.7	18
89	Magnetic Properties Experiments on the Mars Pathfinder Lander: Preliminary Results. Science, 1997, 278, 1768-1770.	12.6	104
90	The imager for Mars Pathfinder experiment. Journal of Geophysical Research, 1997, 102, 4003-4025.	3.3	128

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91	Magnetic properties of feroxyhyte (?-FeOOH). Physics and Chemistry of Minerals, 1995, 22, 333.	0.8	31
92	Titanium and the magnetic phase on Mars. Hyperfine Interactions, 1995, 95, 291-304.	0.5	11
93	Iron-containing weathering products of basalt in a cold, dry climate. Chemical Geology, 1995, 122, 109-119.	3.3	24
94	Heated nontronite: Possible relations to the magnetic phase in the Martian soil. Hyperfine Interactions, 1994, 91, 529-533.	0.5	9
95	Application of external magnetic field to characterize magnetic oxides in the carbonaceous chondrite Orgueil. Hyperfine Interactions, 1994, 91, 589-593.	0.5	2
96	MÃ¶ssbauer spectroscopy showing large-scale inhomogeneity in the presumed martian meteorite Zagami. Physica Scripta, 1992, 46, 94-96.	2.5	17
97	Mossbauer studies of ultrafine iron-containing particles on a carbon support. Journal of Physics Condensed Matter, 1992, 4, 6555-6568.	1.8	51
98	Maghemite in Icelandic basalts. Mineralogical Magazine, 1992, 56, 185-199.	1.4	20
99	MÃ¶ssbauer spectroscopy on the surface of Mars. Why?. Hyperfine Interactions, 1992, 68, 83-94.	0.5	29
100	A MÃ¶ssbauer study of an impactite from the Monturaqui crater. Hyperfine Interactions, 1992, 70, 965-968.	0.5	6
101	Surface magnetism in ultrafine Î±-Fe particles. Journal of Magnetism and Magnetic Materials, 1992, 104-107, 1695-1696.	2.3	10
102	On anomalously magnetic basalt lavas from Stardalur Iceland. Hyperfine Interactions, 1990, 57, 2209-2214.	0.5	9
103	Weathering of basalt in an arctic climate. Hyperfine Interactions, 1990, 57, 2269-2273.	0.5	4
104	Titanomaghemite in magnetic soils on Earth and Mars. Journal of Geophysical Research, 1990, 95, 14423-14425.	3.3	40
105	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
106	Poster contributions. Hyperfine Interactions, 1989, 47-48, 433-589.	0.5	0
107	Extraterrestrial magnetite studied by MÃ¶ssbauer spectroscopy. Hyperfine Interactions, 1989, 50, 659-665.	0.5	6
108	Superparamagnetic amorphous Fe1âˆ’x C x alloy particles in a ferrofluid. Hyperfine Interactions, 1989, 51, 1071-1077.	0.5	16

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109	Asymmetric doublet in MÃ¶ssbauer spectra of superparamagnetic goethite. Hyperfine Interactions, 1988, 42, 1059-1062.	0.5	13
110	Superparamagnetism in primitive meteorites. Hyperfine Interactions, 1988, 41, 827-830.	0.5	12
111	A study of titanomagnetites in basaltic rocks from Nigeria. Physica Scripta, 1988, 38, 508-512.	2.5	9
112	Effect of Heating on Microcrystalline Synthetic Goethite. Clays and Clay Minerals, 1986, 34, 17-24.	1.3	35
113	Superparamagnetic component in the Orgueil meteorite and MÃ¶ssbauer spectroscopy studies in applied magnetic fields. Nature, 1986, 321, 501-503.	27.8	33
114	Magnetic properties of ferrihydrite. Hyperfine Interactions, 1986, 27, 329-332.	0.5	40
115	A study of the sump beaver's dental enamel. Hyperfine Interactions, 1986, 29, 1431-1434.	0.5	5
116	Decoupling of magnetically interacting crystallites of goethite. Hyperfine Interactions, 1986, 28, 549-552.	0.5	25
117	A study of microcrystals of synthetic feroxyhite (Î´â€²FeOOH). Surface Science, 1985, 156, 328-334.	1.9	22
118	Evidence for microcrystallinity in large particles of goethite. Surface Science, 1985, 156, 249-255.	1.9	14
119	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
120	Transient liquid water and water activity at Gale crater on Mars. , 0, .		2