

Morten Bo Madsen

List of Publications by Year in descending order

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120
papers

10,141
citations

50566

48
h-index

37326

100
g-index

122
all docs

122
docs citations

122
times ranked

5542
citing authors

#	ARTICLE	IF	CITATIONS
1	Homogeneity assessment of the SuperCam calibration targets onboard rover perseverance. <i>Analytica Chimica Acta</i> , 2022, 1209, 339837.	2.6	9
2	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. <i>Space Science Reviews</i> , 2021, 217, 24.	3.7	76
3	SuperCam Calibration Targets: Design and Development. <i>Space Science Reviews</i> , 2020, 216, 138.	3.7	44
4	Radiometric Calibration Targets for the Mastcam-Z Camera on the Mars 2020 Rover Mission. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	27
5	An Instrument Anomaly in the Mars Exploration Rover Pancam 1,009-nm Filter (R7): Characterization, Simulation, Correction, and Preliminary Verification. <i>Earth and Space Science</i> , 2019, 6, 96-115.	1.1	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. <i>Optical Engineering</i> , 2019, 58, 1.	0.5	8
7	Martian Eolian Dust Probed by ChemCam. <i>Geophysical Research Letters</i> , 2018, 45, 10,968.	1.5	40
8	Diagenetic silica enrichment and late-stage groundwater activity in Gale crater, Mars. <i>Geophysical Research Letters</i> , 2017, 44, 4716-4724.	1.5	87
9	The Mars Science Laboratory Curiosity rover Mastcam instruments: Preflight and in-flight calibration, validation, and data archiving. <i>Earth and Space Science</i> , 2017, 4, 396-452.	1.1	113
10	ChemCam activities and discoveries during the nominal mission of the Mars Science Laboratory in Gale crater, Mars. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 863-889.	1.6	134
11	Dust deposition on the decks of the Mars Exploration Rovers: 10-years of dust dynamics on the Panoramic Camera calibration targets. <i>Earth and Space Science</i> , 2015, 2, 144-172.	1.1	49
12	Transient liquid water and water activity at Gale crater on Mars. <i>Nature Geoscience</i> , 2015, 8, 357-361.	5.4	277
13	Mössbauer spectroscopy of samples from the 2010 Fimmvörðungur eruption. <i>Hyperfine Interactions</i> , 2014, 226, 601-612.	0.2	3
14	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	6.0	323
15	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1242777.	6.0	687
16	In Situ Radiometric and Exposure Age Dating of the Martian Surface. <i>Science</i> , 2014, 343, 1247166.	6.0	224
17	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	6.0	246
18	Chemistry and texture of the rocks at Rocknest, Gale Crater: Evidence for sedimentary origin and diagenetic alteration. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2109-2131.	1.5	48

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19	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. <i>Science</i> , 2013, 341, 1239505.	6.0	280
20	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	6.0	367
21	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	6.0	326
22	An Optimized Calibration Procedure for Determining Elemental Ratios Using Laser-Induced Breakdown Spectroscopy. <i>Analytical Chemistry</i> , 2013, 85, 1492-1500.	3.2	18
23	The Petrochemistry of Jake_M: A Martian Mugearite. <i>Science</i> , 2013, 341, 1239463.	6.0	134
24	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	6.0	215
25	Ice-vapor equilibrium fractionation factor of hydrogen and oxygen isotopes: Experimental investigations and implications for stable water isotope studies. <i>Rapid Communications in Mass Spectrometry</i> , 2013, 27, 2149-2158.	0.7	65
26	MAHLI at the Rocknest sand shadow: Science and science-enabling activities. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 2338-2360.	1.5	67
27	Characteristics of pebble- and cobble-sized clasts along the Curiosity rover traverse from Bradbury Landing to Rocknest. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 2361-2380.	1.5	44
28	Lattice locations and properties of Fe in Co/Fe co-implanted ZnO. <i>Applied Physics Letters</i> , 2012, 100, 042109.	1.5	17
29	Search for ultraviolet luminescence of soil particles at the Phoenix landing site, Mars. <i>Planetary and Space Science</i> , 2012, 70, 134-147.	0.9	8
30	Factors affecting the electrification of wind-driven dust studied with laboratory simulations. <i>Planetary and Space Science</i> , 2012, 60, 328-335.	0.9	27
31	RAT magnet experiment on the Mars Exploration Rovers: Spirit and Opportunity beyond sol 500. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	3
32	Quantification of the dry history of the Martian soil inferred from in situ microscopy. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	50
33	Winds at the Phoenix landing site. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	89
34	Convective vortices and dust devils at the Phoenix Mars mission landing site. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	118
35	Magnetic and optical properties of airborne dust and settling rates of dust at the Phoenix landing site. <i>Journal of Geophysical Research</i> , 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. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	38

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37	Correction to "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	4
38	H ₂ O at the Phoenix Landing Site. Science, 2009, 325, 58-61.	6.0	500
39	New analysis of the Mössbauer spectra of olivine basalt rocks from Gusev crater on Mars. Planetary and Space Science, 2009, 57, 640-645.	0.9	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	Mössbauer spectroscopy of magnetic minerals in basalt on Earth and Mars. Hyperfine Interactions, 2008, 182, 87-101.	0.2	15
43	Disordered chromite in the Martian meteorite Allan Hills 84001. Hyperfine Interactions, 2008, 186, 9-14.	0.2	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	Mössbauer 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. <i>Planetary and Space Science</i> , 2006, 54, 28-44.	0.9	23
56	On the merits of conversion electron Mössbauer spectroscopy in geosciences. <i>Hyperfine Interactions</i> , 2006, 166, 511-516.	0.2	3
57	Backscattering Mössbauer spectroscopy of Martian dust. <i>Hyperfine Interactions</i> , 2006, 166, 523-527.	0.2	4
58	Simulations of the magnetic properties experiment on Mars Exploration Rovers. <i>Hyperfine Interactions</i> , 2006, 166, 555-560.	0.2	1
59	Backscattering Mössbauer 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. <i>Nature</i> , 2005, 436, 49-54.	13.7	348
62	Indication of drier periods on Mars from the chemistry and mineralogy of atmospheric dust. <i>Nature</i> , 2005, 436, 62-65.	13.7	125
63	Analysis of magnetic dust layers on Mars by PIXE and XRF. <i>X-Ray Spectrometry</i> , 2005, 34, 359-362.	0.9	3
64	Wind-Related Processes Detected by the Spirit Rover at Gusev Crater, Mars. <i>Science</i> , 2004, 305, 810-813.	6.0	94
65	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. <i>Science</i> , 2004, 305, 824-826.	6.0	130
66	Evidence from Opportunity's Microscopic Imager for Water on Meridiani Planum. <i>Science</i> , 2004, 306, 1727-1730.	6.0	146
67	Pancam Multispectral Imaging Results from the Spirit Rover at Gusev Crater. <i>Science</i> , 2004, 305, 800-806.	6.0	153
68	Pancam Multispectral Imaging Results from the Opportunity Rover at Meridiani Planum. <i>Science</i> , 2004, 306, 1703-1709.	6.0	135
69	Magnetic Properties Experiments on the Mars Exploration Rover Spirit at Gusev Crater. <i>Science</i> , 2004, 305, 827-829.	6.0	77
70	The Spirit Rover's Athena Science Investigation at Gusev Crater, Mars. <i>Science</i> , 2004, 305, 794-799.	6.0	404
71	The Opportunity Rover's Athena Science Investigation at Meridiani Planum, Mars. <i>Science</i> , 2004, 306, 1698-1703.	6.0	507
72	Device for measuring surface accumulation of dust: applications for future magnetic properties experiments on Mars. <i>Planetary and Space Science</i> , 2004, 52, 693-698.	0.9	5

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73	Magnetic domain structures and stray fields of individual elongated magnetite grains revealed by magnetic force microscopy (MFM). <i>Physics of the Earth and Planetary Interiors</i> , 2004, 141, 121-129.	0.7	36
74	Textures of the soils and rocks at Gusev Crater from Spirit's Microscopic Imager. <i>Science</i> , 2004, 305, 824-6.	6.0	7
75	The Spirit Rover's Athena science investigation at Gusev Crater, Mars. <i>Science</i> , 2004, 305, 794-9.	6.0	27
76	Magnetic Properties Experiments on the Mars Exploration Rover mission. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	55
77	Rock Abrasion Tool: Mars Exploration Rover mission. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	131
78	Athena Mars rover science investigation. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	233
79	Simulation of the Martian dust aerosol at low wind speeds. <i>Journal of Geophysical Research</i> , 2002, 107, 16-1-16-8.	3.3	22
80	Magnetic Properties Experiments on the Mars Polar Lander. <i>Journal of Geophysical Research</i> , 2001, 106, 17579-17587.	3.3	3
81	Magnetic enhancement on the surface of Mars?. <i>Journal of Geophysical Research</i> , 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. <i>Geografisk Tidsskrift</i> , 2000, 100, 1-6.	0.4	1
83	Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder. <i>Journal of Geophysical Research</i> , 2000, 105, 1721-1755.	3.3	274
84	Magnetic properties experiments on future missions to Mars. <i>Advances in Space Research</i> , 1999, 23, 1875-1878.	1.2	0
85	Overview of the Mars Pathfinder Mission: Launch through landing, surface operations, data sets, and science results. <i>Journal of Geophysical Research</i> , 1999, 104, 8523-8553.	3.3	121
86	[Comment on "Martian soil simulant available for scientific, educational study"] Caution advised on suitability of a Mars soil simulant. <i>Eos</i> , 1999, 80, 168.	0.1	3
87	The magnetic properties experiments on Mars Pathfinder. <i>Journal of Geophysical Research</i> , 1999, 104, 8761-8779.	3.3	85
88	Instruments for the Magnetic Properties Experiments on Mars Pathfinder. <i>Planetary and Space Science</i> , 1998, 46, 449-459.	0.9	18
89	Magnetic Properties Experiments on the Mars Pathfinder Lander: Preliminary Results. <i>Science</i> , 1997, 278, 1768-1770.	6.0	104
90	The imager for Mars Pathfinder experiment. <i>Journal of Geophysical Research</i> , 1997, 102, 4003-4025.	3.3	128

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91	Magnetic properties of feroxyhyte (?-FeOOH). <i>Physics and Chemistry of Minerals</i> , 1995, 22, 333.	0.3	31
92	Titanium and the magnetic phase on Mars. <i>Hyperfine Interactions</i> , 1995, 95, 291-304.	0.2	11
93	Iron-containing weathering products of basalt in a cold, dry climate. <i>Chemical Geology</i> , 1995, 122, 109-119.	1.4	24
94	Heated nontronite: Possible relations to the magnetic phase in the Martian soil. <i>Hyperfine Interactions</i> , 1994, 91, 529-533.	0.2	9
95	Application of external magnetic field to characterize magnetic oxides in the carbonaceous chondrite Orgueil. <i>Hyperfine Interactions</i> , 1994, 91, 589-593.	0.2	2
96	Mössbauer spectroscopy showing large-scale inhomogeneity in the presumed martian meteorite Zagami. <i>Physica Scripta</i> , 1992, 46, 94-96.	1.2	17
97	Mossbauer studies of ultrafine iron-containing particles on a carbon support. <i>Journal of Physics Condensed Matter</i> , 1992, 4, 6555-6568.	0.7	51
98	Maghemite in Icelandic basalts. <i>Mineralogical Magazine</i> , 1992, 56, 185-199.	0.6	20
99	Mössbauer spectroscopy on the surface of Mars. Why?. <i>Hyperfine Interactions</i> , 1992, 68, 83-94.	0.2	29
100	A Mössbauer study of an impactite from the Monturaqui crater. <i>Hyperfine Interactions</i> , 1992, 70, 965-968.	0.2	6
101	Surface magnetism in ultrafine \pm -Fe particles. <i>Journal of Magnetism and Magnetic Materials</i> , 1992, 104-107, 1695-1696.	1.0	10
102	On anomalously magnetic basalt lavas from Stardalur Iceland. <i>Hyperfine Interactions</i> , 1990, 57, 2209-2214.	0.2	9
103	Weathering of basalt in an arctic climate. <i>Hyperfine Interactions</i> , 1990, 57, 2269-2273.	0.2	4
104	Titanomaghemite in magnetic soils on Earth and Mars. <i>Journal of Geophysical Research</i> , 1990, 95, 14423-14425.	3.3	40
105	A study of Fe-B and Fe-Co-B alloy particles produced by reduction with borohydride. <i>Journal of Physics Condensed Matter</i> , 1989, 1, 8199-8208.	0.7	72
106	Poster contributions. <i>Hyperfine Interactions</i> , 1989, 47-48, 433-589.	0.2	0
107	Extraterrestrial magnetite studied by Mössbauer spectroscopy. <i>Hyperfine Interactions</i> , 1989, 50, 659-665.	0.2	6
108	Superparamagnetic amorphous $\text{Fe}_{1-x}\text{C}_x$ alloy particles in a ferrofluid. <i>Hyperfine Interactions</i> , 1989, 51, 1071-1077.	0.2	16

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109	Asymmetric doublet in Mössbauer spectra of superparamagnetic goethite. <i>Hyperfine Interactions</i> , 1988, 42, 1059-1062.	0.2	13
110	Superparamagnetism in primitive meteorites. <i>Hyperfine Interactions</i> , 1988, 41, 827-830.	0.2	12
111	A study of titanomagnetites in basaltic rocks from Nigeria. <i>Physica Scripta</i> , 1988, 38, 508-512.	1.2	9
112	Effect of Heating on Microcrystalline Synthetic Goethite. <i>Clays and Clay Minerals</i> , 1986, 34, 17-24.	0.6	35
113	Superparamagnetic component in the Orgueil meteorite and Mössbauer spectroscopy studies in applied magnetic fields. <i>Nature</i> , 1986, 321, 501-503.	13.7	33
114	Magnetic properties of ferrihydrite. <i>Hyperfine Interactions</i> , 1986, 27, 329-332.	0.2	40
115	A study of the sump beaver's dental enamel. <i>Hyperfine Interactions</i> , 1986, 29, 1431-1434.	0.2	5
116	Decoupling of magnetically interacting crystallites of goethite. <i>Hyperfine Interactions</i> , 1986, 28, 549-552.	0.2	25
117	A study of microcrystals of synthetic ferrihydrite ($\text{Fe}^{2+}\text{FeOOH}$). <i>Surface Science</i> , 1985, 156, 328-334.	0.8	22
118	Evidence for microcrystallinity in large particles of goethite. <i>Surface Science</i> , 1985, 156, 249-255.	0.8	14
119	A new interpretation of Mössbauer spectra of microcrystalline goethite: "Super-ferromagnetism" or "super-spin-glass" behaviour?. <i>Journal of Magnetism and Magnetic Materials</i> , 1983, 40, 163-174.	1.0	338
120	Transient liquid water and water activity at Gale crater on Mars. , 0, .		2