MichelleÂ M Scherer

List of Publications by Year
in descending order

83 papers	8,458 citations	38742 50 h-index	56724 83 g-index
84 all docs	84 docs citations	84 times ranked	5959 citing authors

#	Article	IF	Citations
1	Prenormative verification and validation of a protocol for measuring magnetiteâ€“maghemite ratios in magnetic nanoparticles. Metrologia, 2022, 59, 015001.	1.2	8
2	Natural organic matter inhibits Ni stabilization during Fe(II)-catalyzed ferrihydrite transformation. Science of the Total Environment, 2021, 755, 142612.	8.0	11
3	Effects of Fe(III) Oxide Mineralogy and Phosphate on Fe(II) Secondary Mineral Formation during Microbial Iron Reduction. Minerals (Basel, Switzerland), 2021, 11, 149.	2.0	19
4	Abiotic reduction of nitrite by Fe(<scp>ii</scp>): a comparison of rates and N₂O production. Environmental Sciences: Processes and Impacts, 2021, 23, 1531-1541.	3.5	6
5	Effect of organic C on stable Fe isotope fractionation and isotope exchange kinetics between aqueous Fe(II) and ferrihydrite at neutral pH. Chemical Geology, 2020, 531, 119344.	3.3	10
6	Estimating Consumers at Risk from Drinking Elevated Lead Concentrations: An Iowa Case Study. Environmental Science and Technology Letters, 2020, 7, 948-953.	8.7	3
7	Mineral Defects Enhance Bioavailability of Goethite toward Microbial Fe(III) Reduction. Environmental Science & Technology, 2019, 53, 8883-8891.	10.0	42
8	Electron Donor Utilization and Secondary Mineral Formation during the Bioreduction of Lepidocrocite by Shewanella putrefaciens CN32. Minerals (Basel, Switzerland), 2019, 9, 434.	2.0	18
9	A Closer Look at Fe(II) Passivation of Goethite. ACS Earth and Space Chemistry, 2019, 3, 2717-2725.	2.7	22
10	Abiotic Degradation of Chlorinated Solvents by Clay Minerals and Fe(II): Evidence for Reactive Mineral Intermediates. Environmental Science & Technology, 2019, 53, 14308-14318.	10.0	31
11	The Role of Defects in Fe(II)â€“Goethite Electron Transfer. Environmental Science & Technology, 2018, 52, 2751-2759.	10.0	76
12	Fe(II)-Catalyzed Transformation of Organic Matterâ€“Ferrihydrite Coprecipitates: A Closer Look Using Fe Isotopes. Environmental Science & Technology, 2018, 52, 11142-11150.	10.0	80
13	Reduction of PCE and TCE by magnetite revisited. Environmental Sciences: Processes and Impacts, 2018, 20, 1340-1349.	3.5	29
14	Surface area effects on the reduction of UVI in the presence of synthetic montmorillonite. Chemical Geology, 2017, 464, 110-117.	3.3	19
15	Fe(II)â€“Fe(III) Electron Transfer in a Clay Mineral with Low Fe Content. ACS Earth and Space Chemistry, 2017, 1, 197-208.	2.7	57
16	Emerging investigator series: As(<scp>v</scp>) in magnetite: incorporation and redistribution. Environmental Sciences: Processes and Impacts, 2017, 19, 1208-1219.	3.5	8
17	Fe(II) reduction of pyrolusite (Î²-MnO2) and secondary mineral evolution. Geochemical Transactions, 2017, 18, 7.	0.7	28
18	Oxygen Isotope Evidence for Mn(II)-Catalyzed Recrystallization of Manganite (Î³-MnOOH). Environmental Science & Technology, 2016, 50, 6374-6380.	10.0	29

#	Article	IF	Citations
19	FeIIaqâ€“FeIIIoxide electron transfer and Fe exchange: effect of organic carbon. Environmental Chemistry, 2015, 12, 52.	1.5	27
20	Reaction of Uranium(VI) with Green Rusts: Effect of Interlayer Anion. Current Inorganic Chemistry, 2015, 5, 156-168.	0.2	20
21	Atom Exchange between Aqueous Fe(II) and Structural Fe in Clay Minerals. Environmental Science & Technology, 2015, 49, 2786-2795.	10.0	46
22	Fe2+ catalyzed iron atom exchange and re-crystallization in a tropical soil. Geochimica Et Cosmochimica Acta, 2015, 148, 191-202.	3.9	53
23	Iron Atom Exchange between Hematite and Aqueous Fe(II). Environmental Science & Technology, 2015, 49, 8479-8486.	10.0	99
24	Low temperature, non-stoichiometric oxygen-isotope exchange coupled to Fe(II)â€“goethite interactions. Geochimica Et Cosmochimica Acta, 2015, 160, 38-54.	3.9	27
25	Iron isotope fractionation between aqueous Fe(II) and goethite revisited: New insights based on a multi-direction approach to equilibrium and isotopic exchange rate modification. Geochimica Et Cosmochimica Acta, 2014, 139, 383-398.	3.9	84
26	Determination of the Fe(II)aqâ€“magnetite equilibrium iron isotope fractionation factor using the three-isotope method and a multi-direction approach to equilibrium. Earth and Planetary Science Letters, 2014, 391, 77-86.	4.4	91
27	Fe(II)-Catalyzed Recrystallization of Goethite Revisited. Environmental Science & Technology, 2014, 48, 11302-11311.	10.0	160
28	Effects of Bound Phosphate on the Bioreduction of Lepidocrocite (Î³-FeOOH) and Maghemite (Î³-Fe₂O₃) and Formation of Secondary Minerals. Environmental Science & Technology, 2013, 47, 9157-9166.	10.0	73
29	Spectroscopic Evidence for Fe(II)â€“Fe(III) Electron Transfer at Clay Mineral Edge and Basal Sites. Environmental Science & Technology, 2013, 47, 6969-6977.	10.0	137
30	Electron Exchange and Conduction in Nontronite from First-Principles. Journal of Physical Chemistry C, 2013, 117, 2032-2040.	3.1	43
31	Influence of Chloride and Fe(II) Content on the Reduction of Hg(II) by Magnetite. Environmental Science & Technology, 2013, 47, 6987-6994.	10.0	50
32	Influence of Fe2+-catalysed iron oxide recrystallization on metal cycling. Biochemical Society Transactions, 2012, 40, 1191-1197.	3.4	80
33	Fe Electron Transfer and Atom Exchange in Goethite: Influence of Al-Substitution and Anion Sorption. Environmental Science & Technology, 2012, 46, 10614-10623.	10.0	103
34	Proton-promoted dissolution of Î±-FeOOH nanorods and microrods: Size dependence, anion effects (carbonate and phosphate), aggregation and surface adsorption. Journal of Colloid and Interface Science, 2012, 385, 15-23.	9.4	31
35	Coal Fly Ash as a Source of Iron in Atmospheric Dust. Environmental Science & Technology, 2012, 46, 2112-2120.	10.0	129
36	Inhibition of Trace Element Release During Fe(II)-Activated Recrystallization of Al-, Cr-, and Sn-Substituted Goethite and Hematite. Environmental Science & Technology, 2012, 46, 10031-10039.	10.0	61

#	Article	IF	Citations
37	Fe Atom Exchange between Aqueous Fe²⁺ and Magnetite. Environmental Science & Technology, 2012, 46, 12399-12407.	10.0	112
38	Abiotic reduction of uranium by Fe(II) in soil. Applied Geochemistry, 2012, 27, 1512-1524.	3.0	70
39	Influence of Magnetite Stoichiometry on U^{VI} Reduction. Environmental Science & Technology, 2012, 46, 778-786.	10.0	128
40	Fe²⁺Sorption at the Fe Oxide-Water Interface: A Revised Conceptual Framework. ACS Symposium Series, 2011, , 315-343.	0.5	66
41	Spectroscopic Evidence for Interfacial Fe(II)â˘'Fe(III) Electron Transfer in a Clay Mineral. Environmental Science & Technology, 2011, 45, 540-545.	10.0	141
42	Simulated atmospheric processing of iron oxyhydroxide minerals at low pH: Roles of particle size and acid anion in iron dissolution. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6628-6633.	7.1	116
43	Determination of nanoparticulate magnetite stoichiometry by Mossbauer spectroscopy, acidic dissolution, and powder X-ray diffraction: A critical review. American Mineralogist, 2010, 95, 1017-1026.	1.9	207
44	Photoreductive dissolution of Feâ€containing mineral dust particles in acidic media. Journal of Geophysical Research, 2010, 115, .	3.3	65
45	Nanogoethite Formation from Oxidation of Fe(II) Sorbed on Aluminum Oxide: Implications for Contaminant Reduction. Environmental Science & Technology, 2010, 44, 3765-3771.	10.0	29
46	Nanorod Dissolution Quenched in the Aggregated State. Langmuir, 2010, 26, 1524-1527.	3.5	43
47	Effects of Oxyanions, Natural Organic Matter, and Bacterial Cell Numbers on the Bioreduction of Lepidocrocite (Î³-FeOOH) and the Formation of Secondary Mineralization Products. Environmental Science & Technology, 2010, 44, 4570-4576.	10.0	125
48	Iron isotope fractionation between aqueous ferrous iron and goethite. Earth and Planetary Science Letters, 2010, 295, 241-250.	4.4	175
49	Connecting Observations of Hematite (Î±-Fe₂O₃) Growth Catalyzed by Fe(II). Environmental Science & Technology, 2010, 44, 61-67.	10.0	110
50	Redox Behavior of Magnetite: Implications for Contaminant Reduction. Environmental Science & Technology, 2010, 44, 55-60.	10.0	195
51	Abiotic Processes Affecting the Remediation of Chlorinated Solvents. SERDP and ESTCP Remediation Technology Monograph Series, 2010, , 69-108.	0.3	4
52	Atom Exchange between Aqueous Fe(II) and Goethite: An Fe Isotope Tracer Study. Environmental Science & Technology, 2009, 43, 1102-1107.	10.0	306
53	Influence of Magnetite Stoichiometry on Fe^{II} Uptake and Nitrobenzene Reduction. Environmental Science & Technology, 2009, 43, 3675-3680.	10.0	149
54	Surface Chemistry and Dissolution of Î±-FeOOH Nanorods and Microrods: Environmental Implications of Size-Dependent Interactions with Oxalate. Journal of Physical Chemistry C, 2009, 113, 2175-2186.	3.1	120

#	ARTICLE	IF	CITATIONS
55	Characterization and acidâ€mobilization study of ironâ€containing mineral dust source materials. Journal of Geophysical Research, 2008, 113, .	3.3	139
56	Adsorption of Organic Acids on TiO₂ Nanoparticles: Effects of pH, Nanoparticle Size, and Nanoparticle Aggregation. Langmuir, 2008, 24, 6659-6667.	3.5	230
57	Interpreting nanoscale size-effects in aggregated Fe-oxide suspensions: Reaction of Fe(II) with Goethite. Geochimica Et Cosmochimica Acta, 2008, 72, 1365-1380.	3.9	102
58	Abiotic Transformation of Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) by Green Rusts. Environmental Science & Technology, 2008, 42, 3975-3981.	10.0	69
59	Green Rust Formation from the Bioreduction of Î³ â€“FeOOH (Lepidocrocite): Comparison of Several<i>Shewanella</i>Species. Geomicrobiology Journal, 2007, 24, 211-230.	2.0	72
60	Fe(II) Sorption on Hematite:Â New Insights Based on Spectroscopic Measurements. Environmental Science & Technology, 2007, 41, 471-477.	10.0	171
61	Morin transition suppression in Polycrystalline 57Hematite (Î±-Fe2O3) exposed to 56Fe(II). Hyperfine Interactions, 2007, 174, 111-119.	0.5	16
62	Inhibition of bacterial perchlorate reduction by zero-valent iron. Biodegradation, 2005, 16, 23-32.	3.0	34
63	Sustained and Complete Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX) Degradation in Zero-Valent Iron Simulated Barriers under Different Microbial Conditions. Environmental Technology (United) Tj ETQq1 1 0.784314 rg BT /Overlock 10 Tf	2.2	11
64	Hexahydro-1,3,5-trinitro-1,3,5-triazine Transformation by Biologically Reduced Ferrihydrite:Â Evolution of Fe Mineralogy, Surface Area, and Reaction Rates. Environmental Science & Technology, 2005, 39, 5183-5189.	10.0	45
65	Nitrate and Nitrite Reduction by Fe0: Influence of Mass Transport, Temperature, and Denitrifying Microbes. Environmental Engineering Science, 2004, 21, 219-229.	1.6	51
66	Spectroscopic Evidence for Fe(II)â^'Fe(III) Electron Transfer at the Iron Oxideâ^'Water Interface. Environmental Science & Technology, 2004, 38, 4782-4790.	10.0	478
67	Abiotic Transformation of Hexahydro-1,3,5-trinitro-1,3,5-triazine by FeIIBound to Magnetite. Environmental Science & Technology, 2004, 38, 1408-1414.	10.0	135
68	Diversity of Contaminant Reduction Reactions by Zerovalent Iron:Â Role of the Reductate. Environmental Science & Technology, 2004, 38, 139-147.	10.0	175
69	Kinetics of 1,1,1-Trichloroethane Transformation by Iron Sulfide and a Methanogenic Consortium. Environmental Science & Technology, 2002, 36, 4540-4546.	10.0	44
70	Kinetics of Nitrate, Nitrite, and Cr(VI) Reduction by Iron Metal. Environmental Science & Technology, 2002, 36, 299-306.	10.0	574
71	Discussion on â€œElectrochemical and Raman spectroscopic studies of the influence of chlorinated solvents on the corrosion behaviour of iron in borate buffer and in simulated groundwaterâ€• [Corrosion Science 42 (2000) 1921â€“1939]. Corrosion Science, 2002, 44, 1151-1157.	6.6	8
72	Effects of Natural Organic Matter, Anthropogenic Surfactants, and Model Quinones on the Reduction of Contaminants by Zero-Valent Iron. Water Research, 2001, 35, 4435-4443.	11.3	192

#	Article	IF	Citations
73	Mass Transport Effects on the Kinetics of Nitrobenzene Reduction by Iron Metal. Environmental Science & Technology, 2001, 35, 2804-2811.	10.0	110
74	Kinetics of Cr(VI) Reduction by Carbonate Green Rust. Environmental Science & Technology, 2001, 35, 3488-3494.	10.0	236
75	Visualizing Redox Chemistry: Probing Environmental Oxidationâ€"Reduction Reactions with Indicator Dyes. The Chemical Educator, 2001, 6, 172-179.	0.0	68
76	Chemistry and Microbiology of Permeable Reactive Barriers forIn SituGroundwater Clean up. Critical Reviews in Environmental Science and Technology, 2000, 30, 363-411.	12.8	256
77	Chemistry and Microbiology of Permeable Reactive Barriers forIn SituGroundwater Clean up. Critical Reviews in Microbiology, 2000, 26, 221-264.	6.1	142
78	The Role of Oxides in Reduction Reactions at the Metal-Water Interface. ACS Symposium Series, 1999, , 301-322.	0.5	83
79	Correlation Analysis of Rate Constants for Dechlorination by Zero-Valent Iron. Environmental Science & Technology, 1998, 32, 3026-3033.	10.0	161
80	Kinetics of Carbon Tetrachloride Reduction at an Oxide-Free Iron Electrode. Environmental Science & Technology, 1997, 31, 2385-2391.	10.0	117
81	Remediating Ground Water with Zero-Valent Metals: Chemical Considerations in Barrier Design. Ground Water Monitoring and Remediation, 1997, 17, 108-114.	0.8	98
82	Kinetics of Halogenated Organic Compound Degradation by Iron Metal. Environmental Science & Technology, 1996, 30, 2634-2640.	10.0	639
83	Vertical Distribution and Partitioning of Chromium in a Glaciof luvial Aquifer. Ground Water Monitoring and Remediation, 1994, 14, 150-159.	0.8	31