MichelleÂ M Scherer

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Kinetics of Halogenated Organic Compound Degradation by Iron Metal. Environmental Science & Technology, 1996, 30, 2634-2640.	10.0	639
2	Kinetics of Nitrate, Nitrite, and Cr(VI) Reduction by Iron Metal. Environmental Science & Technology, 2002, 36, 299-306.	10.0	574
3	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
4	Atom Exchange between Aqueous Fe(II) and Goethite: An Fe Isotope Tracer Study. Environmental Science & Technology, 2009, 43, 1102-1107.	10.0	306
5	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
6	Kinetics of Cr(VI) Reduction by Carbonate Green Rust. Environmental Science & Technology, 2001, 35, 3488-3494.	10.0	236
7	Adsorption of Organic Acids on TiO₂ Nanoparticles: Effects of pH, Nanoparticle Size, and Nanoparticle Aggregation. Langmuir, 2008, 24, 6659-6667.	3.5	230
8	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
9	Redox Behavior of Magnetite: Implications for Contaminant Reduction. Environmental Science & Technology, 2010, 44, 55-60.	10.0	195
10	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
11	Diversity of Contaminant Reduction Reactions by Zerovalent Iron:Â Role of the Reductate. Environmental Science & Technology, 2004, 38, 139-147.	10.0	175
12	Iron isotope fractionation between aqueous ferrous iron and goethite. Earth and Planetary Science Letters, 2010, 295, 241-250.	4.4	175
13	Fe(II) Sorption on Hematite:Â New Insights Based on Spectroscopic Measurements. Environmental Science & Technology, 2007, 41, 471-477.	10.0	171
14	Correlation Analysis of Rate Constants for Dechlorination by Zero-Valent Iron. Environmental Science & Technology, 1998, 32, 3026-3033.	10.0	161
15	Fe(II)-Catalyzed Recrystallization of Goethite Revisited. Environmental Science & Technology, 2014, 48, 11302-11311.	10.0	160
16	Influence of Magnetite Stoichiometry on Fe^{II} Uptake and Nitrobenzene Reduction. Environmental Science & Technology, 2009, 43, 3675-3680.	10.0	149
17	Chemistry and Microbiology of Permeable Reactive Barriers forIn SituGroundwater Clean up. Critical Reviews in Microbiology, 2000, 26, 221-264.	6.1	142
18	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

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19	Characterization and acidâ€mobilization study of ironâ€containing mineral dust source materials. Journal of Geophysical Research, 2008, 113, .	3.3	139
20	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
21	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
22	Coal Fly Ash as a Source of Iron in Atmospheric Dust. Environmental Science & Technology, 2012, 46, 2112-2120.	10.0	129
23	Influence of Magnetite Stoichiometry on U^{VI} Reduction. Environmental Science & Technology, 2012, 46, 778-786.	10.0	128
24	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
25	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
26	Kinetics of Carbon Tetrachloride Reduction at an Oxide-Free Iron Electrode. Environmental Science & Technology, 1997, 31, 2385-2391.	10.0	117
27	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
28	Fe Atom Exchange between Aqueous Fe²⁺ and Magnetite. Environmental Science & Technology, 2012, 46, 12399-12407.	10.0	112
29	Mass Transport Effects on the Kinetics of Nitrobenzene Reduction by Iron Metal. Environmental Science & Technology, 2001, 35, 2804-2811.	10.0	110
30	Connecting Observations of Hematite (Î±-Fe₂O₃) Growth Catalyzed by Fe(II). Environmental Science & Technology, 2010, 44, 61-67.	10.0	110
31	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
32	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
33	Iron Atom Exchange between Hematite and Aqueous Fe(II). Environmental Science & Technology, 2015, 49, 8479-8486.	10.0	99
34	Remediating Ground Water with Zero-Valent Metals: Chemical Considerations in Barrier Design. Ground Water Monitoring and Remediation, 1997, 17, 108-114.	0.8	98
35	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
36	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

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37	The Role of Oxides in Reduction Reactions at the Metal-Water Interface. ACS Symposium Series, 1999, , 301-322.	0.5	83
38	Influence of Fe2+-catalysed iron oxide recrystallization on metal cycling. Biochemical Society Transactions, 2012, 40, 1191-1197.	3.4	80
39	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
40	The Role of Defects in Fe(II)â€"Goethite Electron Transfer. Environmental Science & Technology, 2018, 52, 2751-2759.	10.0	76
41	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
42	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
43	Abiotic reduction of uranium by Fe(II) in soil. Applied Geochemistry, 2012, 27, 1512-1524.	3.0	70
44	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
45	Visualizing Redox Chemistry: Probing Environmental Oxidationâ€"Reduction Reactions with Indicator Dyes. The Chemical Educator, 2001, 6, 172-179.	0.0	68
46	Fe²⁺Sorption at the Fe Oxide-Water Interface: A Revised Conceptual Framework. ACS Symposium Series, 2011, , 315-343.	0.5	66
47	Photoreductive dissolution of Feâ€containing mineral dust particles in acidic media. Journal of Geophysical Research, 2010, 115, .	3.3	65
48	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
49	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
50	Fe2+ catalyzed iron atom exchange and re-crystallization in a tropical soil. Geochimica Et Cosmochimica Acta, 2015, 148, 191-202.	3.9	53
51	Nitrate and Nitrite Reduction by Fe0: Influence of Mass Transport, Temperature, and Denitrifying Microbes. Environmental Engineering Science, 2004, 21, 219-229.	1.6	51
52	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
53	Atom Exchange between Aqueous Fe(II) and Structural Fe in Clay Minerals. Environmental Science & Technology, 2015, 49, 2786-2795.	10.0	46
54	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

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55	Kinetics of 1,1,1-Trichloroethane Transformation by Iron Sulfide and a Methanogenic Consortium. Environmental Science & Technology, 2002, 36, 4540-4546.	10.0	44
56	Nanorod Dissolution Quenched in the Aggregated State. Langmuir, 2010, 26, 1524-1527.	3.5	43
57	Electron Exchange and Conduction in Nontronite from First-Principles. Journal of Physical Chemistry C, 2013, 117, 2032-2040.	3.1	43
58	Mineral Defects Enhance Bioavailability of Goethite toward Microbial Fe(III) Reduction. Environmental Science & Technology, 2019, 53, 8883-8891.	10.0	42
59	Inhibition of bacterial perchlorate reduction by zero-valent iron. Biodegradation, 2005, 16, 23-32.	3.0	34
60	Vertical Distribution and Partitioning of Chromium in a Glaciof luvial Aquifer. Ground Water Monitoring and Remediation, 1994, 14, 150-159.	0.8	31
61	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
62	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
63	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
64	Oxygen Isotope Evidence for Mn(II)-Catalyzed Recrystallization of Manganite (Î³-MnOOH). Environmental Science & Technology, 2016, 50, 6374-6380.	10.0	29
65	Reduction of PCE and TCE by magnetite revisited. Environmental Sciences: Processes and Impacts, 2018, 20, 1340-1349.	3.5	29
66	Fe(II) reduction of pyrolusite (Î²-MnO2) and secondary mineral evolution. Geochemical Transactions, 2017, 18, 7.	0.7	28
67	FeIIaqâ€"FeIIIoxide electron transfer and Fe exchange: effect of organic carbon. Environmental Chemistry, 2015, 12, 52.	1.5	27
68	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
69	A Closer Look at Fe(II) Passivation of Goethite. ACS Earth and Space Chemistry, 2019, 3, 2717-2725.	2.7	22
70	Reaction of Uranium(VI) with Green Rusts: Effect of Interlayer Anion. Current Inorganic Chemistry, 2015, 5, 156-168.	0.2	20
71	Surface area effects on the reduction of UVI in the presence of synthetic montmorillonite. Chemical Geology, 2017, 464, 110-117.	3.3	19
72	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

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73	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
74	Morin transition suppression in Polycrystalline 57Hematite (Î±-Fe2O3) exposed to 56Fe(II). Hyperfine Interactions, 2007, 174, 111-119.	0.5	16
75	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
76	Natural organic matter inhibits Ni stabilization during Fe(II)-catalyzed ferrihydrite transformation. Science of the Total Environment, 2021, 755, 142612.	8.0	11
77	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
78	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
79	Emerging investigator series: As(<scp>v</scp>) in magnetite: incorporation and redistribution. Environmental Sciences: Processes and Impacts, 2017, 19, 1208-1219.	3.5	8
80	Prenormative verification and validation of a protocol for measuring magnetiteâ€"maghemite ratios in magnetic nanoparticles. Metrologia, 2022, 59, 015001.	1.2	8
81	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
82	Abiotic Processes Affecting the Remediation of Chlorinated Solvents. SERDP and ESTCP Remediation Technology Monograph Series, 2010, , 69-108.	0.3	4
83	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