

Mengqiang Zhu

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Arsenite Oxidation by a Poorly Crystalline Manganese-Oxide. 2. Results from X-ray Absorption Spectroscopy and X-ray Diffraction. <i>Environmental Science & Technology</i> , 2010, 44, 8467-8472.	10.0	181
2	Quantum Chemical Study of Arsenic (III, V) Adsorption on Mn-Oxides: Implications for Arsenic(III) Oxidation. <i>Environmental Science & Technology</i> , 2009, 43, 6655-6661.	10.0	154
3	Cation Effects on the Layer Structure of Biogenic Mn-Oxides. <i>Environmental Science & Technology</i> , 2010, 44, 4465-4471.	10.0	126
4	Redox Reactions between Mn(II) and Hexagonal Birnessite Change Its Layer Symmetry. <i>Environmental Science & Technology</i> , 2016, 50, 1750-1758.	10.0	102
5	X-ray Absorption Spectroscopic Quantification and Speciation Modeling of Sulfate Adsorption on Ferrihydrite Surfaces. <i>Environmental Science & Technology</i> , 2016, 50, 8067-8076.	10.0	96
6	Formation of nano-crystalline todorokite from biogenic Mn oxides. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 3232-3245.	3.9	93
7	Phosphate and phytate adsorption and precipitation on ferrihydrite surfaces. <i>Environmental Science: Nano</i> , 2017, 4, 2193-2204.	4.3	81
8	Structural Transformation of Birnessite by Fulvic Acid under Anoxic Conditions. <i>Environmental Science & Technology</i> , 2018, 52, 1844-1853.	10.0	81
9	Ni(II) Sorption on Biogenic Mn-Oxides with Varying Mn Octahedral Layer Structure. <i>Environmental Science & Technology</i> , 2010, 44, 4472-4478.	10.0	79
10	Structure of Sulfate Adsorption Complexes on Ferrihydrite. <i>Environmental Science and Technology Letters</i> , 2014, 1, 97-101.	8.7	79
11	Sulfate Local Coordination Environment in Schwertmannite. <i>Environmental Science & Technology</i> , 2015, 49, 10440-10448.	10.0	77
12	Effects of crystallite size on the structure and magnetism of ferrihydrite. <i>Environmental Science: Nano</i> , 2016, 3, 190-202.	4.3	77
13	Structural study of biotic and abiotic poorly-crystalline manganese oxides using atomic pair distribution function analysis. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 81, 39-55.	3.9	68
14	Quantifying Uncertainties in Sequential Chemical Extraction of Soil Phosphorus Using XANES Spectroscopy. <i>Environmental Science & Technology</i> , 2020, 54, 2257-2267.	10.0	61
15	Cadmium Isotope Fractionation during Adsorption and Substitution with Iron (Oxyhydr)oxides. <i>Environmental Science & Technology</i> , 2021, 55, 11601-11611.	10.0	58
16	Coupled Manganese Redox Cycling and Organic Carbon Degradation on Mineral Surfaces. <i>Environmental Science & Technology</i> , 2020, 54, 8801-8810.	10.0	55
17	Formation and secondary mineralization of ferrihydrite in the presence of silicate and Mn(II). <i>Chemical Geology</i> , 2015, 415, 37-46.	3.3	52
18	Effects of metal cations on coupled birnessite structural transformation and natural organic matter adsorption and oxidation. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 250, 292-310.	3.9	47

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19	Macromolecular Characterization of Compound Selectivity for Oxidation and Oxidative Alterations of Dissolved Organic Matter by Manganese Oxide. <i>Environmental Science & Technology</i> , 2021, 55, 7741-7751.	10.0	46
20	A Quantitative Model for the Coupled Kinetics of Arsenic Adsorption/Desorption and Oxidation on Manganese Oxides. <i>Environmental Science and Technology Letters</i> , 2018, 5, 175-180.	8.7	44
21	Quantification of Coexisting Inner- and Outer-Sphere Complexation of Sulfate on Hematite Surfaces. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 387-398.	2.7	43
22	Trivalent manganese on vacancies triggers rapid transformation of layered to tunneled manganese oxides (TMOs): Implications for occurrence of TMOs in low-temperature environment. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 240, 173-190.	3.9	38
23	Metal Adsorption Controls Stability of Layered Manganese Oxides. <i>Environmental Science & Technology</i> , 2019, 53, 7453-7462.	10.0	38
24	Phosphate Sorption Speciation and Precipitation Mechanisms on Amorphous Aluminum Hydroxide. <i>Soil Systems</i> , 2019, 3, 20.	2.6	36
25	The Presence of Ferrihydrite Promotes Abiotic Formation of Manganese (Oxyhydr)oxides. <i>Soil Science Society of America Journal</i> , 2015, 79, 1297-1305.	2.2	35
26	Molecular-Scale Understanding of Sulfate Exchange from Schwertmannite by Chromate Versus Arsenate. <i>Environmental Science & Technology</i> , 2021, 55, 5857-5867.	10.0	35
27	Coupled Kinetics of Ferrihydrite Transformation and As(V) Sequestration under the Effect of Humic Acids: A Mechanistic and Quantitative Study. <i>Environmental Science & Technology</i> , 2018, 52, 11632-11641.	10.0	34
28	Effects of Fe(II) on Cd(II) immobilization by Mn(III)-rich δ -MnO ₂ . <i>Chemical Engineering Journal</i> , 2018, 353, 167-175.	12.7	34
29	Aeolian dust deposition and the perturbation of phosphorus transformations during long-term ecosystem development in a cool, semi-arid environment. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 246, 498-514.	3.9	32
30	Cd(II) retention and remobilization on δ -MnO ₂ and Mn(III)-rich δ -MnO ₂ affected by Mn(II). <i>Environment International</i> , 2019, 130, 104932.	10.0	32
31	Synthesis of Birnessite in the Presence of Phosphate, Silicate, or Sulfate. <i>Inorganic Chemistry</i> , 2016, 55, 10248-10258.	4.0	31
32	Phosphorus Speciation and Solubility in Aeolian Dust Deposited in the Interior American West. <i>Environmental Science & Technology</i> , 2018, 52, 2658-2667.	10.0	30
33	Effects of phosphate and silicate on the transformation of hydroxycarbonate green rust to ferric oxyhydroxides. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 171, 1-14.	3.9	27
34	Binding Geometries of Silicate Species on Ferrihydrite Surfaces. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 125-134.	2.7	27
35	A Bioinspired Molybdenum Catalyst for Aqueous Perchlorate Reduction. <i>Journal of the American Chemical Society</i> , 2021, 143, 7891-7896.	13.7	26
36	Effect of Zn coprecipitation on the structure of layered Mn oxides. <i>Chemical Geology</i> , 2018, 493, 234-245.	3.3	23

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37	Catalytic Reduction of Aqueous Chlorate With MoO ₄ ²⁻ Immobilized on Pd/C. ACS Catalysis, 2020, 10, 8201-8211.	11.2	22
38	The Speciation of Cd in Cd-Fe Coprecipitates: Does Cd Substitute for Fe in Goethite Structure?. ACS Earth and Space Chemistry, 2019, 3, 2225-2236.	2.7	20
39	Oxidation of Mn(III) Species by Pb(IV) Oxide as a Surrogate Oxidant in Aquatic Systems. Environmental Science & Technology, 2020, 54, 14124-14133.	10.0	17
40	Surveying Manganese Oxides as Electrode Materials for Harnessing Salinity Gradient Energy. Environmental Science & Technology, 2020, 54, 5746-5754.	10.0	17
41	X-ray Spectroscopic Quantification of Phosphorus Transformation in Saharan Dust during Trans-Atlantic Dust Transport. Environmental Science & Technology, 2021, 55, 12694-12703.	10.0	17
42	Incorporation of Pb(II) into hematite during ferrihydrite transformation. Environmental Science: Nano, 2020, 7, 829-841.	4.3	16
43	Effects of Mn ²⁺ , Ni ²⁺ , and Cu ²⁺ on the Formation and Transformation of Hydrosulfate Green Rust: Reaction Processes and Underlying Mechanisms. ACS Earth and Space Chemistry, 2019, 3, 519-530.	2.7	14
44	Formation and transformation of schwertmannite through direct Fe ³⁺ hydrolysis under various geochemical conditions. Environmental Science: Nano, 2020, 7, 2385-2398.	4.3	14
45	Inhibition of Oxyanions on Redox-driven Transformation of Layered Manganese Oxides. Environmental Science & Technology, 2021, 55, 3419-3429.	10.0	14
46	Process-based modeling of arsenic(III) oxidation by manganese oxides under circumneutral pH conditions. Water Research, 2020, 185, 116195.	11.3	13
47	Coupled morphological and structural evolution of γ -MnO ₂ to δ -MnO ₂ through multistage oriented assembly processes: the role of Mn(III). Environmental Science: Nano, 2020, 7, 238-249.	4.3	10
48	Vertical patterns of phosphorus concentration and speciation in three forest soil profiles of contrasting climate. Geochimica Et Cosmochimica Acta, 2021, 310, 1-18.	3.9	10
49	Long-Range and Short-Range Structures of Multimetallic Layered Double Hydroxides. Journal of Physical Chemistry C, 2022, 126, 5311-5322.	3.1	10
50	Photocatalytic Oxidation of Dissolved Mn ²⁺ by TiO ₂ and the Formation of Tunnel Structured Manganese Oxides. ACS Earth and Space Chemistry, 2021, 5, 2105-2114.	2.7	8
51	As(III) adsorption-oxidation behavior and mechanisms on Cr(VI)-incorporated schwertmannite. Environmental Science: Nano, 2021, 8, 1593-1602.	4.3	7
52	Oxidative dissolution of orpiment and realgar induced by dissolved and solid Mn(III) species. Geochimica Et Cosmochimica Acta, 2022, 332, 307-326.	3.9	5
53	Fate and availability of dust-borne phosphorus in a sub-humid temperate forest. Chemical Geology, 2022, 587, 120628.	3.3	4
54	Effect and fate of Ni during aging and thermal-induced phyllo-manganate-to-tectomanganate transformation. Geochimica Et Cosmochimica Acta, 2022, 333, 200-215.	3.9	2