Andrew S Elwood Madden

List of Publications by Year
in descending order

56 papers	2,520 citations	236925 25 h-index	197818 49 g-index
60 all docs	60 docs citations	60 times ranked	3818 citing authors

#	Article	IF	Citations
1	Size-dependent structural transformations of hematite nanoparticles. 1. Phase transition. Physical Chemistry Chemical Physics, 2007, 9, 1736.	2.8	382
2	A test of geochemical reactivity as a function of mineral size: Manganese oxidation promoted by hematite nanoparticles. Geochimica Et Cosmochimica Acta, 2005, 69, 389-398.	3.9	220
3	Bioreduction of hematite nanoparticles by the dissimilatory iron reducing bacterium Shewanella oneidensis MR-1. Geochimica Et Cosmochimica Acta, 2009, 73, 962-976.	3.9	216
4	Insights for size-dependent reactivity of hematite nanomineral surfaces through Cu2+ sorption. Geochimica Et Cosmochimica Acta, 2006, 70, 4095-4104.	3.9	208
5	Coupled biticâ€“abiotic Mn(II) oxidation pathway mediates the formation and structural evolution of biogenic Mn oxides. Geochimica Et Cosmochimica Acta, 2011, 75, 6048-6063.	3.9	191
6	Jarosite dissolution rates and nanoscale mineralogy. Geochimica Et Cosmochimica Acta, 2012, 91, 306-321.	3.9	105
7	Constraints on superoxide mediated formation of manganese oxides. Frontiers in Microbiology, 2013, 4, 262.	3.5	81
8	Morphological and Chemical/Physical Characterization of Fe-Doped Synthetic Chrysotile Nanotubes. Advanced Functional Materials, 2005, 15, 1009-1016.	14.9	74
9	Contrasting effects of Al substitution on microbial reduction of Fe(III) (hydr)oxides. Geochimica Et Cosmochimica Acta, 2010, 74, 7086-7099.	3.9	62
10	Effects of gamma-sterilization on the physico-chemical properties of natural sediments. Chemical Geology, 2008, 251, 1-7.	3.3	59
11	Comparison of titanium soaked in 5M NaOH or 5M KOH solutions. Materials Science and Engineering C, 2013, 33, 327-339.	7.3	59
12	Effects of arsenic incorporation on jarosite dissolution rates and reaction products. Geochimica Et Cosmochimica Acta, 2013, 112, 192-207.	3.9	57
13	Dynamic weakening by nanoscale smoothing during high-velocity fault slip. Geology, 2013, 41, 739-742.	4.4	52
14	How long was Meridiani Planum wet? Applying a jarosite stopwatch to determine the duration of aqueous diagenesis. Geology, 2009, 37, 635-638.	4.4	46
15	Earth's Nano-Compartment for Toxic Metals. Elements, 2005, 1, 199-203.	0.5	42
16	Microbial Community Changes in Response to Ethanol or Methanol Amendments for U(VI) Reduction. Applied and Environmental Microbiology, 2010, 76, 5728-5735.	3.1	38
17	Testing of Brushite (<scp><scp>CaHPO</scp></scp>₄Â·2<scp><scp>H</scp></scp>₂<scp><scp>O</scp></scp>) in Synthetic Biomineralization Solutions and In Situ Crystallization of Brushite Microâ€Granules. Journal of the American Ceramic Society, 2012, 95, 2178-2188.	3.8	38
18	Permian dust in Oklahoma: Source and origin for Middle Permian (Flowerpot-Blaine) redbeds in Western Tropical Pangaea. Sedimentary Geology, 2013, 284-285, 181-196.	2.1	38

#	Article	IF	Citations
19	Microbial uranium immobilization independent of nitrate reduction. Environmental Microbiology, 2007, 9, 2321-2330.	3.8	35
20	Effect of Fly Ash on the Behavior of Expansive Soils: Microscopic Analysis. Environmental and Engineering Geoscience, 2013, 19, 85-94.	0.9	35
21	Scalable economic extracellular synthesis of CdS nanostructured particles by a non-pathogenic thermophile. Journal of Industrial Microbiology and Biotechnology, 2013, 40, 1263-1271.	3.0	31
22	Deposition of nanoparticles onto polysaccharide-coated surfaces: implications for nanoparticleâ€“biofilm interactions. Environmental Science: Nano, 2014, 1, 117-122.	4.3	31
23	Jarosite dissolution rates and maximum lifetimes in high salinity brines: Implications for Earth and Mars. Earth and Planetary Science Letters, 2012, 357-358, 327-336.	4.4	28
24	Donorâ€dependent Extent of Uranium Reduction for Bioremediation of Contaminated Sediment Microcosms. Journal of Environmental Quality, 2009, 38, 53-60.	2.0	26
25	Biological versus mineralogical chromium reduction: potential for reoxidation by manganese oxide. Environmental Sciences: Processes and Impacts, 2015, 17, 1930-1940.	3.5	25
26	Na-jarosite dissolution rates: The effect of mineral composition on jarosite lifetimes. Icarus, 2013, 223, 438-443.	2.5	24
27	Quantifying the distribution of nanodiamonds in pre-Younger Dryas to recent age deposits along Bull Creek, Oklahoma Panhandle, USA. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1726-1731.	7.1	23
28	Characterization of Hydration Productsâ€™ Formation and Strength Development in Cement-Stabilized Kaolinite Using TG and XRD. Journal of Materials in Civil Engineering, 2018, 30, .	2.9	23
29	Dynamic interplay between uranyl phosphate precipitation, sorption, and phase evolution. Applied Geochemistry, 2015, 58, 147-160.	3.0	22
30	Alunite dissolution rates: Dissolution mechanisms and implications for Mars. Geochimica Et Cosmochimica Acta, 2016, 172, 93-106.	3.9	22
31	Size-Dependent Reactivity of Magnetite Nanoparticles: A Field-Laboratory Comparison. Environmental Science & Technology, 2014, 48, 11413-11420.	10.0	21
32	Low-temperature mechanism for formation of coarse crystalline hematite through nanoparticle aggregation. Earth and Planetary Science Letters, 2010, 298, 377-384.	4.4	20
33	Assessing hydrodynamic effects on jarosite dissolution rates, reaction products, and preservation on Mars. Journal of Geophysical Research E: Planets, 2015, 120, 625-642.	3.6	20
34	The frictional strength of talc gouge in highâ€velocity shear experiments. Journal of Geophysical Research: Solid Earth, 2017, 122, 3661-3676.	3.4	20
35	Friction Evolution of Granitic Faults: Heating Controlled Transition From Powder Lubrication to Frictional Melt. Journal of Geophysical Research: Solid Earth, 2017, 122, 9275-9289.	3.4	20
36	Chapter 15 Scanning Electron Microscopy of Garnet from Southern Michigan Soils: Etching Rates and Inheritance of Pre-Glacial and Pre-Pedogenic Grain-Surface Textures. Developments in Sedimentology, 2007, , 413-432.	0.5	15

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37	Long-term solid-phase fate of co-precipitated U(VI)-Fe(III) following biological iron reduction by Thermoanaerobacter. American Mineralogist, 2012, 97, 1641-1652.	1.9	15
38	Using Chromate to Investigate the Impact of Natural Organics on the Surface Reactivity of Nanoparticulate Magnetite. Environmental Science & Technology, 2015, 49, 2156-2162.	10.0	12
39	Transformation of mackinawite to greigite by trichloroethylene and tetrachloroethylene. Environmental Sciences: Processes and Impacts, 2016, 18, 1266-1273.	3.5	10
40	Atomic Force Microscopy Method for Measuring Smectite Coefficients of Friction. Clays and Clay Minerals, 2010, 58, 813-820.	1.3	9
41	Considering the formation of hematite spherules on Mars by freezing aqueous hematite nanoparticle suspensions. Icarus, 2017, 286, 202-211.	2.5	9
42	Aqueous alteration of pyroxene in sulfate, chloride, and perchlorate brines: Implications for post-Noachian aqueous alteration on Mars. Geochimica Et Cosmochimica Acta, 2019, 257, 336-353.	3.9	9
43	Synthetic Aragonite (<scp><scp>CaCO</scp></scp>₃) as a Potential Additive in Calcium Phosphate Cements: Evaluation in Trisâ€Free <scp>SBF</scp> at 37Â°C. Journal of the American Ceramic Society, 2014, 97, 3052-3061.	3.8	8
44	Non-stirred synthesis of Na- and Mg-doped, carbonated apatitic calcium phosphate. Ceramics International, 2013, 39, 1485-1493.	4.8	7
45	Can we use pyroxene weathering textures to interpret aqueous alteration conditions? Yes and No. American Mineralogist, 2017, 102, 1915-1921.	1.9	5
46	Electrostatic adsorption of hematite nanoparticles on self-assembled monolayer surfaces. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	4
47	Jarosite dissolution rates in perchlorate brine. Icarus, 2018, 301, 189-195.	2.5	3
48	Siderite Dissolution in Mars-analog Brines: Kinetics and Reaction Products. Planetary Science Journal, 2021, 2, 169.	3.6	3
49	Nano2Earth: Incorporating Cutting-edge Research into Secondary Education Through Scientist-Educator Partnerships. Journal of Geoscience Education, 2007, 55, 402-412.	1.4	3
50	Laboratory-Simulated Diagenesis of Nontronite. Clays and Clay Minerals, 2012, 60, 616-632.	1.3	2
51	Integrating the Sciences to Investigate Groundwater Pollution. Science Activities, 2009, 46, 7-14.	0.6	0
52	Using Combined TEM, Raman, XRD, and VNIR techniques to Investigate Secondary Phase Formation and Textural Relationships in Brine + Jarosite Experiments. Microscopy and Microanalysis, 2017, 23, 2144-2145.	0.4	0
53	MANGANESE-BEARING DOLOMITE DISSOLUTION DRIVES HEXAVALENT CHROMIUM OCCURRENCE IN THE CENTRAL OKLAHOMA AQUIFER. , 2016, , .		0
54	CONNECTED PORE SYSTEMS OF SHALE CORE, CHEMICALLY-TREATED SHALE SAMPLES, AND BULK MINERALS. , 2016, , .		0

#	Article	IF	Citations
55	CHLORIDE AND SULFATE EXCHANGE IN SHORT-TERM, LOW TEMPERATURE BRINE + JAROSITE EXPERIMENTS. , 2016, , .		0
56	Effects of Mass Wasting on the Physiochemical Properties of Fluvial Sediments in Puerto Rico Following Hurricane Maria. Journal of Geophysical Research F: Earth Surface, 2022, 127, .	2.8	0