Aaron A Thompson

List of Publications by Year
in descending order

56 papers	3,111 citations	186265 28 h-index	161849 54 g-index
63 all docs	63 docs citations	63 times ranked	3234 citing authors

#	Article	IF	Citations
1	Beyond clay: towards an improved set of variables for predicting soil organic matter content. Biogeochemistry, 2018, 137, 297-306.	3.5	423
2	Iron-oxide crystallinity increases during soil redox oscillations. Geochimica Et Cosmochimica Acta, 2006, 70, 1710-1727.	3.9	320
3	Iron-mediated organic matter decomposition in humid soils can counteract protection. Nature Communications, 2020, 11, 2255.	12.8	181
4	Colloid Mobilization During Soil Iron Redox Oscillations. Environmental Science & Technology, 2006, 40, 5743-5749.	10.0	163
5	Iron solid-phase differentiation along a redox gradient in basaltic soils. Geochimica Et Cosmochimica Acta, 2011, 75, 119-133.	3.9	148
6	Emerging land use practices rapidly increase soil organic matter. Nature Communications, 2015, 6, 6995.	12.8	133
7	Rapid Iron Reduction Rates Are Stimulated by High-Amplitude Redox Fluctuations in a Tropical Forest Soil. Environmental Science & Technology, 2017, 51, 3250-3259.	10.0	129
8	Mobilization of colloidal carbon during iron reduction in basaltic soils. Geoderma, 2014, 221-222, 139-145.	5.1	89
9	Ferrous Iron Oxidation under Varying pO₂ Levels: The Effect of Fe(III)/Al(III) Oxide Minerals and Organic Matter. Environmental Science & Technology, 2018, 52, 597-606.	10.0	84
10	Improving understanding of soil organic matter dynamics by triangulating theories, measurements, and models. Biogeochemistry, 2018, 140, 1-13.	3.5	83
11	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
12	Rayleigh fractionation of iron isotopes during pedogenesis along a climate sequence of Hawaiian basalt. Chemical Geology, 2007, 238, 72-83.	3.3	79
13	Contrasting evolution of iron phase composition in soils exposed to redox fluctuations. Geochimica Et Cosmochimica Acta, 2018, 235, 89-102.	3.9	77
14	Order from disorder: do soil organic matter composition and turnover co-vary with iron phase crystallinity?. Biogeochemistry, 2018, 140, 93-110.	3.5	73
15	Influence of pO₂ on Iron Redox Cycling and Anaerobic Organic Carbon Mineralization in a Humid Tropical Forest Soil. Environmental Science & Technology, 2018, 52, 7709-7719.	10.0	73
16	Beyond bulk: Density fractions explain heterogeneity in global soil carbon abundance and persistence. Global Change Biology, 2022, 28, 1178-1196.	9.5	67
17	Enrichment of Lignin-Derived Carbon in Mineral-Associated Soil Organic Matter. Environmental Science & Technology, 2019, 53, 7522-7531.	10.0	63
18	Silicon control of strontium and cesium partitioning in hydroxide-weathered sediments. Geochimica Et Cosmochimica Acta, 2008, 72, 2024-2047.	3.9	54

#	Article	IF	Citations
19	Fe2+ catalyzed iron atom exchange and re-crystallization in a tropical soil. Geochimica Et Cosmochimica Acta, 2015, 148, 191-202.	3.9	53
20	Contrasting Fe speciation in two humid forest soils: Insight into organomineral associations in redox-active environments. Geochimica Et Cosmochimica Acta, 2018, 238, 68-84.	3.9	49
21	An open-source database for the synthesis of soil radiocarbon data: International Soil Radiocarbon Database (ISRaD) version 1.0. Earth System Science Data, 2020, 12, 61-76.	9.9	48
22	Faster redox fluctuations can lead to higher iron reduction rates in humid forest soils. Biogeochemistry, 2018, 137, 367-378.	3.5	47
23	The influence of native soil organic matter and minerals on ferrous iron oxidation. Geochimica Et Cosmochimica Acta, 2021, 292, 254-270.	3.9	47
24	Effect of metal oxide redox state in red mud catalysts on ketonization of fast pyrolysis oil derived oxygenates. Applied Catalysis B: Environmental, 2019, 241, 430-441.	20.2	44
25	Hot Spots and Hot Moments of Soil Moisture Explain Fluctuations in Iron and Carbon Cycling in a Humid Tropical Forest Soil. Soil Systems, 2018, 2, 59.	2.6	42
26	Iron (Oxyhydr)Oxides Serve as Phosphate Traps in Tundra and Boreal Peat Soils. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 227-246.	3.0	38
27	Fractionation of yttrium and holmium during basaltic soil weathering. Geochimica Et Cosmochimica Acta, 2013, 119, 18-30.	3.9	37
28	Simultaneously quantifying ferrihydrite and goethite in natural sediments using the method of standard additions with X-ray absorption spectroscopy. Chemical Geology, 2018, 476, 248-259.	3.3	32
29	Fellaqâ€“Fellloxide electron transfer and Fe exchange: effect of organic carbon. Environmental Chemistry, 2015, 12, 52.	1.5	27
30	Redoximorphic Bt horizons of the Calhoun CZO soils exhibit depth-dependent iron-oxide crystallinity. Journal of Soils and Sediments, 2019, 19, 785-797.	3.0	27
31	Ideas and perspectives: Strengthening the biogeosciences in environmental research networks. Biogeosciences, 2018, 15, 4815-4832.	3.3	24
32	Strontium and Cesium Release Mechanisms during Unsaturated Flow through Waste-Weathered Hanford Sediments. Environmental Science & Technology, 2011, 45, 8313-8320.	10.0	21
33	Trace contaminant concentration affects mineral transformation and pollutant fate in hydroxide-weathered Hanford sediments. Journal of Hazardous Materials, 2011, 197, 119-127.	12.4	21
34	Contaminant Desorption during Long-Term Leaching of Hydroxide-Weathered Hanford Sediments. Environmental Science & Technology, 2010, 44, 1992-1997.	10.0	20
35	Development of martian regolith and bedrock simulants: Potential and limitations of martian regolith as an in-situ resource. Icarus, 2021, 354, 114055.	2.5	20
36	What do relationships between extractable metals and soil organic carbon concentrations mean?. Soil Science Society of America Journal, 2022, 86, 195-208.	2.2	18

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37	Transient O2 pulses direct Fe crystallinity and Fe(III)-reducer gene expression within a soil microbiome. Microbiome, 2018, 6, 189.	11.1	17
38	Effects of sample storage on microbial Fe-reduction in tropical rainforest soils. Soil Biology and Biochemistry, 2014, 68, 44-51.	8.8	16
39	Oxidation of soil organic carbon during an anoxic-oxic transition. Geoderma, 2020, 377, 114584.	5.1	15
40	Temperature sensitivity of soil respiration in a low-latitude forest ecosystem varies by season and habitat but is unaffected by experimental warming. Biogeochemistry, 2018, 141, 63-73.	3.5	14
41	Seasonal and spatial variation in the potential for iron reduction in soils of the Southeastern Piedmont of the US. Catena, 2019, 180, 32-40.	5.0	13
42	Coupling Red-Mud Ketonization of a Model Bio-Oil Mixture with Aqueous Phase Hydrogenation Using Activated Carbon Monoliths. Energy & Fuels, 2017, 31, 9529-9541.	5.1	11
43	The structure of natural biogenic iron (oxyhydr)oxides formed in circumneutral pH environments. Geochimica Et Cosmochimica Acta, 2021, 308, 237-255.	3.9	11
44	Potential for Iron Reduction Increases with Rainfall in Montane Basaltic Soils of Hawaii. Soil Science Society of America Journal, 2018, 82, 176-185.	2.2	10
45	Theoretical Constraints on Fe Reduction Rates in Upland Soils as a Function of Hydroclimatic Conditions. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG005894.	3.0	8
46	White clover living mulch enhances soil health vs. annual cover crops. Agronomy Journal, 2021, 113, 3697-3707.	1.8	8
47	Localized alteration of ferrihydrite natural organic matter coprecipitates following reaction with Fe(II). Soil Science Society of America Journal, 2022, 86, 253-263.	2.2	8
48	Iron speciation in soil size fractions under different land uses. Geoderma, 2022, 418, 115842.	5.1	8
49	Mineral transformation controls speciation and pore-fluid transmission of contaminants in waste-weathered Hanford sediments. Geochimica Et Cosmochimica Acta, 2014, 141, 487-507.	3.9	7
50	Stacking Time and Aluminum Sulfate Effects on Polyether Ionophores in Broiler Litter. Journal of Environmental Quality, 2015, 44, 1923-1929.	2.0	5
51	Eucalyptus urograndis and Pinus taeda enhance removal of chlorobenzene and benzene in sand culture: A greenhouse study. International Journal of Phytoremediation, 2016, 18, 977-984.	3.1	5
52	Long-term broiler litter amendments can alter the soilâ€™s capacity to sorb monensin. Environmental Science and Pollution Research, 2017, 24, 13466-13473.	5.3	5
53	Mapping depth to the argillic horizon on historically farmed soil currently under forests. Geoderma, 2020, 369, 114291.	5.1	5
54	Alum and Rainfall Effects on Ionophores in Runoff from Surface-Applied Broiler Litter. Journal of Environmental Quality, 2015, 44, 1657-1666.	2.0	4

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55	Quantifying Particulate and Colloidal Release of Radionuclides in Wasteâ€Weathered Hanford Sediments. Journal of Environmental Quality, 2015, 44, 945-952.	2.0	2
56	Bioavailability of phosphorus to loblolly pine and red maple in clay and saprolite from the southeastern Piedmont, USA. Soil Science Society of America Journal, 2022, 86, 1677-1691.	2.2	1