Jon Chorover

List of Publications by Year
in descending order

126 papers	6,320 citations	71102 41 h-index	74163 75 g-index
129 all docs	129 docs citations	129 times ranked	7501 citing authors

#	Article	IF	Citations
1	Linking litter calcium, earthworms and soil properties: a common garden test with 14 tree species. Ecology Letters, 2005, 8, 811-818.	6.4	586
2	The chemistry of pedogenic thresholds. Geoderma, 2001, 100, 321-353.	5.1	358
3	Reaction of forest floor organic matter at goethite, birnessite and smectite surfaces. Geochimica Et Cosmochimica Acta, 2001, 65, 95-109.	3.9	309
4	ATR-FTIR Spectroscopy Reveals Bond Formation During Bacterial Adhesion to Iron Oxide. Langmuir, 2006, 22, 8492-8500.	3.5	307
5	Soil Biogeochemical Processes within the Critical Zone. Elements, 2007, 3, 321-326.	0.5	224
6	Hydrological partitioning in the critical zone: Recent advances and opportunities for developing transferable understanding of water cycle dynamics. Water Resources Research, 2015, 51, 6973-6987.	4.2	189
7	Surface charge evolution of mineral-organic complexes during pedogenesis in Hawaiian basalt. Geochimica Et Cosmochimica Acta, 2004, 68, 4859-4876.	3.9	187
8	Colloid Mobilization During Soil Iron Redox Oscillations. Environmental Science & Technology, 2006, 40, 5743-5749.	10.0	163
9	Rapid abiotic transformation of nitrate in an acid forest soil. Biogeochemistry, 2001, 54, 131-146.	3.5	157
10	Adsorption of perfluorooctanoic acid and perfluorooctanesulfonic acid to iron oxide surfaces as studied by flow-through ATR-FTIR spectroscopy. Environmental Chemistry, 2012, 9, 148.	1.5	156
11	Surface charge characteristics of kaolinitic tropical soils. Geochimica Et Cosmochimica Acta, 1995, 59, 875-884.	3.9	122
12	How Water, Carbon, and Energy Drive Critical Zone Evolution: The Jemezâ€“Santa Catalina Critical Zone Observatory. Vadose Zone Journal, 2011, 10, 884-899.	2.2	111
13	An open system framework for integrating critical zone structure and function. Biogeochemistry, 2011, 102, 15-29.	3.5	103
14	Phytostabilization of mine tailings using compost-assisted direct planting: Translating greenhouse results to the field. Science of the Total Environment, 2016, 565, 451-461.	8.0	102
15	Effect of arbuscular mycorrhizal fungi on plant biomass and the rhizosphere microbial community structure of mesquite grown in acidic lead/zinc mine tailings. Science of the Total Environment, 2011, 409, 1009-1016.	8.0	100
16	Solution chemistry profiles of mixed-conifer forests before and after fire. Biogeochemistry, 1994, 26, 115-144.	3.5	97
17	Rare earth element release from phosphate minerals in the presence of organic acids. Chemical Geology, 2010, 278, 1-14.	3.3	96
18	Designing a network of critical zone observatories to explore the living skin of the terrestrial Earth. Earth Surface Dynamics, 2017, 5, 841-860.	2.4	92

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19	Effect of silicic acid on arsenate and arsenite retention mechanisms on 6-L ferrihydrite: A spectroscopic and batch adsorption approach. Applied Geochemistry, 2013, 38, 110-120.	3.0	84
20	Quantifying PPCP interaction with dissolved organic matter in aqueous solution: Combined use of fluorescence quenching and tandem mass spectrometry. Water Research, 2012, 46, 943-954.	11.3	83
21	Surficial weathering of iron sulfide mine tailings under semi-arid climate. Geochimica Et Cosmochimica Acta, 2014, 141, 240-257.	3.9	79
22	Coevolution of nonlinear trends in vegetation, soils, and topography with elevation and slope aspect: A case study in the sky islands of southern Arizona. Journal of Geophysical Research F: Earth Surface, 2013, 118, 741-758.	2.8	76
23	Interactions of Carbamazepine in Soil: Effects of Dissolved Organic Matter. Journal of Environmental Quality, 2011, 40, 942-948.	2.0	75
24	Response of Key Soil Parameters during Compost-Assisted Phytostabilization in Extremely Acidic Tailings: Effect of Plant Species. Environmental Science & Technology, 2012, 46, 1019-1027.	10.0	73
25	Environmental factors influencing the structural dynamics of soil microbial communities during assisted phytostabilization of acid-generating mine tailings: A mesocosm experiment. Science of the Total Environment, 2014, 500-501, 314-324.	8.0	67
26	Rare earth elements as reactive tracers of biogeochemical weathering in forested rhyolitic terrain. Chemical Geology, 2015, 391, 19-32.	3.3	67
27	Toxic metal(loid) speciation during weathering of iron sulfide mine tailings under semi-arid climate. Applied Geochemistry, 2015, 62, 131-149.	3.0	65
28	Stream water carbon controls in seasonally snow-covered mountain catchments: impact of inter-annual variability of water fluxes, catchment aspect and seasonal processes. Biogeochemistry, 2014, 118, 273-290.	3.5	60
29	Critical Zone Services: Expanding Context, Constraints, and Currency beyond Ecosystem Services. Vadose Zone Journal, 2015, 14, vzj2014.10.0142.	2.2	60
30	Influence of Phosphate and Silica on U(VI) Precipitation from Acidic and Neutralized Wastewaters. Environmental Science & Technology, 2014, 48, 6097-6106.	10.0	59
31	Evolution of CO₂ during Birnessiteâ€induced Oxidation of ¹⁴Câ€Labeled Catechol. Soil Science Society of America Journal, 2000, 64, 157-163.	2.2	58
32	The Role of Critical Zone Observatories in Critical Zone Science. Developments in Earth Surface Processes, 2015, , 15-78.	2.8	57
33	Geochemical evolution of the <scp>C</scp>ritical <scp>Z</scp>one across variable time scales informs concentrationâ€discharge relationships: <scp>J</scp>emez <scp>R</scp>iver <scp>B</scp>asin <scp>C</scp>ritical <scp>Z</scp>one <scp>O</scp>bservatory. Water Resources Research, 2017, 53, 4169-4196.	4.2	57
34	Biotransformation and Degradation of the Insensitive Munitions Compound, 3-Nitro-1,2,4-triazol-5-one, by Soil Bacterial Communities. Environmental Science & Technology, 2015, 49, 5681-5688.	10.0	54
35	Geochemical Weathering Increases Lead Bioaccessibility in Semi-Arid Mine Tailings. Environmental Science & Technology, 2012, 46, 5834-5841.	10.0	48
36	Concentrationâ€Discharge Relations in the Critical Zone: Implications for Resolving Critical Zone Structure, Function, and Evolution. Water Resources Research, 2017, 53, 8654-8659.	4.2	48

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37	The Landscape Evolution Observatory: A large-scale controllable infrastructure to study coupled Earth-surface processes. Geomorphology, 2015, 244, 190-203.	2.6	47
38	(Bio)transformation of 2,4-dinitroanisole (DNAN) in soils. Journal of Hazardous Materials, 2016, 304, 214-221.	12.4	46
39	Structural Charge and Cesium Retention in a Chronosequence of Tephritic Soils. Soil Science Society of America Journal, 1999, 63, 169-177.	2.2	45
40	Colloids and organic matter complexation control trace metal concentration-discharge relationships in Marshall Gulch stream waters. Water Resources Research, 2016, 52, 7931-7944.	4.2	45
41	Leachate Chemistry of Fieldâ€Weathered Spent Mushroom Substrate. Journal of Environmental Quality, 2001, 30, 1699-1709.	2.0	43
42	Climatic and landscape controls on water transit times and silicate mineral weathering in the critical zone. Water Resources Research, 2015, 51, 6036-6051.	4.2	43
43	ATR-FTIR study of lipopolysaccharides at mineral surfaces. Colloids and Surfaces B: Biointerfaces, 2008, 62, 188-198.	5.0	42
44	Changes in lead and zinc lability during weathering-induced acidification of desert mine tailings: Coupling chemical and micro-scale analyses. Applied Geochemistry, 2009, 24, 2234-2245.	3.0	42
45	Adsorption of novel insensitive munitions compounds at clay mineral and metal oxide surfaces. Environmental Chemistry, 2015, 12, 74.	1.5	38
46	Sequential anaerobic-aerobic biodegradation of emerging insensitive munitions compound 3-nitro-1,2,4-triazol-5-one (NTO). Chemosphere, 2017, 167, 478-484.	8.2	38
47	Quinoline Sorption on Kaoliniteâ€“Humic Acid Complexes. Soil Science Society of America Journal, 1999, 63, 850-857.	2.2	37
48	Fractionation of yttrium and holmium during basaltic soil weathering. Geochimica Et Cosmochimica Acta, 2013, 119, 18-30.	3.9	37
49	Quantifying Topographic and Vegetation Effects on the Transfer of Energy and Mass to the Critical Zone. Vadose Zone Journal, 2015, 14, 1-16.	2.2	37
50	Artifacts Caused by Collection of Soil Solution with Passive Capillary Samplers. Soil Science Society of America Journal, 2000, 64, 1330-1336.	2.2	35
51	A mass-balance model to separate and quantify colloidal and solute redistributions in soil. Chemical Geology, 2011, 282, 113-119.	3.3	34
52	A considerable fraction of soil-respired CO2 is not emitted directly to the atmosphere. Scientific Reports, 2018, 8, 13518.	3.3	34
53	Rare earth elements (REY) sorption on soils of contrasting mineralogy and texture. Environment International, 2019, 128, 279-291.	10.0	34
54	Microscale Speciation of Arsenic and Iron in Ferric-Based Sorbents Subjected to Simulated Landfill Conditions. Environmental Science & Technology, 2013, 47, 12992-13000.	10.0	32

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55	Mechanisms of Arsenic Sequestration by Prosopis juliflora during the Phytostabilization of Metalliferous Mine Tailings. Environmental Science & Technology, 2018, 52, 1156-1164.	10.0	32
56	Treatment impacts on temporal microbial community dynamics during phytostabilization of acid-generating mine tailings in semiarid regions. Science of the Total Environment, 2018, 618, 357-368.	8.0	32
57	Hillslope-scale experiment demonstrates the role of convergence during two-step saturation. Hydrology and Earth System Sciences, 2014, 18, 3681-3692.	4.9	31
58	Ecosystem Composition Controls the Fate of Rare Earth Elements during Incipient Soil Genesis. Scientific Reports, 2017, 7, 43208.	3.3	31
59	Signatures of Hydrologic Function Across the Critical Zone Observatory Network. Water Resources Research, 2021, 57, e2019WR026635.	4.2	31
60	Colloid Chemistry of Kaolinitic Tropical Soils. Soil Science Society of America Journal, 1995, 59, 1558-1564.	2.2	30
61	Incipient subsurface heterogeneity and its effect on overland flow generation â€“ insight from a modeling study of the first experiment at the Biosphere 2 Landscape Evolution Observatory. Hydrology and Earth System Sciences, 2014, 18, 1873-1883.	4.9	29
62	Microtopography-mediated hydrologic environment controls elemental migration and mineral weathering in subalpine surface soils of subtropical monsoonal China. Geoderma, 2019, 344, 82-98.	5.1	26
63	Effect of Re-acidification on Buffalo Grass Rhizosphere and Bulk Microbial Communities During Phytostabilization of Metalliferous Mine Tailings. Frontiers in Microbiology, 2019, 10, 1209.	3.5	24
64	Solid-phase redistribution of rare earth elements in hillslope pedons subjected to different hydrologic fluxes. Chemical Geology, 2016, 426, 1-18.	3.3	23
65	Solid phase evolution in the Biosphere 2 hillslope experiment as predicted by modeling of hydrologic and geochemical fluxes. Hydrology and Earth System Sciences, 2009, 13, 2273-2286.	4.9	23
66	Fractionation of Dissolved Organic Matter by (Oxy)Hydroxideâ€Coated Sands: Competitive Sorbate Displacement during Reactive Transport. Vadose Zone Journal, 2014, 13, 1-13.	2.2	22
67	Hydrologic functioning of the deep critical zone and contributions to streamflow in a highâ€elevation catchment: Testing of multiple conceptual models. Hydrological Processes, 2019, 33, 476-494.	2.6	22
68	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
69	Bacterial Rhizoplane Colonization Patterns of Buchloe dactyloides Growing in Metalliferous Mine Tailings Reflect Plant Status and Biogeochemical Conditions. Microbial Ecology, 2017, 74, 853-867.	2.8	20
70	Effects of Spent Mushroom Substrate Weathering on the Chemistry of Underlying Soils. Journal of Environmental Quality, 2001, 30, 2127-2134.	2.0	19
71	Changes in Zinc Speciation with Mine Tailings Acidification in a Semiarid Weathering Environment. Environmental Science & Technology, 2011, 45, 7166-7172.	10.0	19
72	The effects of climate and landscape position on chemical denudation and mineral transformation in the Santa Catalina mountain critical zone observatory. Applied Geochemistry, 2011, 26, S80-S84.	3.0	19

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73	Impact of organic carbon on weathering and chemical denudation of granular basalt. Geochimica Et Cosmochimica Acta, 2014, 139, 508-526.	3.9	19
74	Oxidative Weathering Decreases Bioaccessibility of Toxic Metal(loid)s in PM₁₀ Emissions From Sulfide Mine Tailings. GeoHealth, 2018, 2, 118-138.	4.0	19
75	Arsenic and iron speciation and mobilization during phytostabilization of pyritic mine tailings. Geochimica Et Cosmochimica Acta, 2020, 286, 306-323.	3.9	19
76	Iron-activated persulfate oxidation degrades aqueous Perfluorooctanoic acid (PFOA) at ambient temperature. Chemosphere, 2021, 281, 130824.	8.2	19
77	Subsurface Pore Water Contributions to Stream Concentration-Discharge Relations Across a Snowmelt Hydrograph. Frontiers in Earth Science, 2018, 6, .	1.8	18
78	Uranium speciation in acid waste-weathered sediments: The role of aging and phosphate amendments. Applied Geochemistry, 2018, 89, 109-120.	3.0	17
79	Distinct stores and the routing of water in the deep critical zone of a snow-dominated volcanic catchment. Hydrology and Earth System Sciences, 2019, 23, 4661-4683.	4.9	17
80	Strong slopeâ€aspect control of regolith thickness by bedrock foliation. Earth Surface Processes and Landforms, 2020, 45, 2998-3010.	2.5	17
81	Impacts of Sampling Dissolved Organic Matter with Passive Capillary Wicks Versus Aqueous Soil Extraction. Soil Science Society of America Journal, 2012, 76, 2019-2030.	2.2	16
82	Microbial toxicity and characterization of DNAN (bio)transformation product mixtures. Chemosphere, 2016, 154, 499-506.	8.2	16
83	Abiotic reduction of insensitive munition compounds by sulfate green rust. Environmental Chemistry, 2018, 15, 259.	1.5	16
84	Adsorption and oxidation of 3-nitro-1,2,4-triazole-5-one (NTO) and its transformation product (3-amino-1,2,4-triazole-5-one, ATO) at ferrihydrite and birnessite surfaces. Environmental Pollution, 2018, 240, 200-208.	7.5	16
85	Assessing Microbial Community Patterns During Incipient Soil Formation From Basalt. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 941-958.	3.0	16
86	Uranium Release from Acidic Weathered Hanford Sediments: Single-Pass Flow-Through and Column Experiments. Environmental Science & Technology, 2017, 51, 11011-11019.	10.0	15
87	Oxidation of reduced daughter products from 2,4-dinitroanisole (DNAN) by Mn(IV) and Fe(III) oxides. Chemosphere, 2018, 201, 790-798.	8.2	14
88	Wetâ€“dry cycles impact DOM retention in subsurface soils. Biogeosciences, 2018, 15, 821-832.	3.3	14
89	Trapping of lead (Pb) by corn and pea root border cells. Plant and Soil, 2018, 430, 205-217.	3.7	14
90	U-series isotopic signatures of soils and headwater streams in a semi-arid complex volcanic terrain. Chemical Geology, 2016, 445, 68-83.	3.3	13

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91	CO₂diffusion into pore spaces limits weathering rate of an experimental basalt landscape. Geology, 2017, 45, 203-206.	4.4	13
92	Environmental Fate of ¹⁴C Radiolabeled 2,4-Dinitroanisole in Soil Microcosms. Environmental Science & Technology, 2017, 51, 13327-13334.	10.0	13
93	Resolving Deep Critical Zone Architecture in Complex Volcanic Terrain. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005189.	2.8	13
94	Rates and mechanisms of uranyl oxyhydroxide mineral dissolution. Geochimica Et Cosmochimica Acta, 2017, 207, 298-321.	3.9	12
95	Pore water chemistry reveals gradients in mineral transformation across a model basaltic hillslope. Geochemistry, Geophysics, Geosystems, 2016, 17, 2054-2069.	2.5	11
96	Dissolved Carbonate and pH Control the Dissolution of Uranyl Phosphate Minerals in Flow-Through Porous Media. Environmental Science & Technology, 2020, 54, 6031-6042.	10.0	11
97	Surficial weathering of kaolin regolith in a subtropical climate: Implications for supergene pedogenesis and bedrock argillization. Geoderma, 2019, 337, 225-237.	5.1	10
98	Biochar-templated surface precipitation and inner-sphere complexation effectively removes arsenic from acid mine drainage. Environmental Science and Pollution Research, 2021, 28, 45519-45533.	5.3	10
99	Iron(II) monosulfide (FeS) minerals reductively transform the insensitive munitions compounds 2,4-dinitroanisole (DNAN) and 3-nitro-1,2,4-triazol-5-one (NTO). Chemosphere, 2021, 285, 131409.	8.2	10
100	Resolving colocalization of bacteria and metal(loid)s on plant root surfaces by combining fluorescence in situ hybridization (FISH) with multiple-energy micro-focused X-ray fluorescence (ME) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	3.8	9
101	Controlled Experiments of Hillslope Coevolution at the Biosphere 2 Landscape Evolution Observatory: Toward Prediction of Coupled Hydrological, Biogeochemical, and Ecological Change. , 0, , .		9
102	Phosphate controls uranium release from acidic waste-weathered Hanford sediments. Journal of Hazardous Materials, 2021, 416, 126240.	12.4	9
103	Bioaccessibility, release kinetics, and molecular speciation of arsenic and lead in geo-dusts from the Iron King Mine Federal Superfund site in Humboldt, Arizona. Reviews on Environmental Health, 2014, 29, 23-7.	2.4	8
104	Soil Fluid Biogeochemical Response to Climatic Events. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2866-2882.	3.0	8
105	Enhanced removal of per- and polyfluoroalkyl substances by crosslinked polyaniline polymers. Chemical Engineering Journal, 2022, 446, 137246.	12.7	8
106	Experimental Assessment of Passive Capillary Wick Sampler Suitability for Inorganic Soil Solution Constituents. Soil Science Society of America Journal, 2014, 78, 486-495.	2.2	7
107	Bioconcentration potential and microbial toxicity of onium cations in photoacid generators. Environmental Science and Pollution Research, 2021, 28, 8915-8921.	5.3	7
108	Analysis of hydrophilic per- and polyfluorinated sulfonates including trifluoromethanesulfonate using solid phase extraction and mixed-mode liquid chromatography-tandem mass spectrometry. Journal of Chromatography A, 2022, 1664, 462817.	3.7	6

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109	Resiliency of Silica Export Signatures When Low Order Streams Are Subject to Storm Events. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	3.0	6
110	A New Standard-Based Polynomial Interpolation (SBPIn) method to address gel-to-gel variability for the comparison of multiple denaturing gradient gel electrophoresis profile matrices. Journal of Microbiological Methods, 2013, 92, 173-177.	1.6	5
111	U-series and Sr isotopes as tracers of mineral weathering and water routing from the deep Critical Zone to streamflow in a high-elevation volcanic catchment. Chemical Geology, 2021, 570, 120156.	3.3	5
112	Hydrogeophysical comparison of hillslope critical zone architecture for different geologic substrates. Geophysics, 2021, 86, WB87-WB107.	2.6	5
113	Photochemical fate of sulfonium photoacid generator cations under photolithography relevant UV irradiation. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 416, 113324.	3.9	5
114	Soil Lysimeter Excavation for Coupled Hydrological, Geochemical, and Microbiological Investigations. Journal of Visualized Experiments, 2016, , .	0.3	4
115	Contrasting Community Assembly Forces Drive Microbial Structural and Potential Functional Responses to Precipitation in an Incipient Soil System. Frontiers in Microbiology, 2021, 12, 754698.	3.5	4
116	Response to â€œComments on â€˜Artifacts Caused by Collection of Soil Solution with Passive Capillary Samplersâ€™â€• Soil Science Society of America Journal, 2001, 65, 1572-1573.	2.2	3
117	Experimental weathering of a volcaniclastic critical zone profile: Key role of colloidal constituents in aqueous geochemical response. Chemical Geology, 2021, 559, 119886.	3.3	3
118	Synthesis and Characterization of Customizable Polyaniline-Derived Polymers and Their Application for Perfluorooctanoic Acid Removal from Aqueous Solution. ACS ES&T Water, 2021, 1, 1438-1446.	4.6	3
119	Constraints of Climate and Age on Soil Development in Hawaiâ€˜i. , 2022, , 49-88.		3
120	Identifying Toxic Biotransformation Products of the Insensitive Munitions Compound, 2,4-Dinitroanisole (DNAN), Using Liquid Chromatography Coupled to Quadrupole Time-of-Flight Mass Spectrometry (LC-QToF-MS). ACS Symposium Series, 2016, , 133-145.	0.5	2
121	The Role of Manganese Dioxide in the Natural Formation of Organochlorines. ACS ES&T Water, 2021, 1, 2523-2530.	4.6	2
122	Biosolids leachate variability, stabilization surrogates, and optical metric selection. Environmental Science: Water Research and Technology, 2022, 8, 657-670.	2.4	2
123	Metal Lability and Mass Transfer Response to Direct-Planting Phytostabilization of Pyritic Mine Tailings. Minerals (Basel, Switzerland), 2022, 12, 757.	2.0	2
124	Tailored Polyanilines Are High-Affinity Adsorbents for Per- and Polyfluoroalkyl Substances. ACS ES&T Water, 2022, 2, 1402-1410.	4.6	2
125	Fate of bis-(4-tert-butyl phenyl)-iodonium under photolithography relevant irradiation and the environmental risk properties of the formed photoproducts. Environmental Science and Pollution Research, 2022, 29, 25988-25994.	5.3	0
126	Effects of flow on uranium speciation in soils impacted by acidic waste fluids. Journal of Environmental Radioactivity, 2022, 251-252, 106955.	1.7	0