Markus Flury

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3997070/publications.pdf

Version: 2024-02-01

146 papers	9,999 citations	23500 58 h-index	39575 94 g-index
155 all docs	155 docs citations	155 times ranked	8167 citing authors

#	Article	IF	Citations
1	Susceptibility of soils to preferential flow of water: A field study. Water Resources Research, 1994, 30, 1945-1954.	1.7	706
2	Experimental Evidence of Transport of Pesticides through Field Soilsâ€"A Review. Journal of Environmental Quality, 1996, 25, 25-45.	1.0	455
3	Is Biodegradable Plastic Mulch the Solution to Agricultureâ€™s Plastic Problem?. Environmental Science & Technology, 2017, 51, 1068-1069.	4.6	252
4	Tracer Characteristics of Brilliant Blue FCF. Soil Science Society of America Journal, 1995, 59, 22-27.	1.2	231
5	Dyes as tracers for vadose zone hydrology. Reviews of Geophysics, 2003, 41, .	9.0	220
6	Nano-enabled pesticides for sustainable agriculture and global food security. Nature Nanotechnology, 2022, 17, 347-360.	15.6	219
7	Bromide in the Natural Environment: Occurrence and Toxicity. Journal of Environmental Quality, 1993, 22, 747-758.	1.0	215
8	Comparison of different methods to measure contact angles of soil colloids. Journal of Colloid and Interface Science, 2008, 328, 299-307.	5.0	189
9	Characterization of Particleâ€Size Distribution in Soils with a Fragmentation Model. Soil Science Society of America Journal, 1999, 63, 782-788.	1.2	179
10	Brilliant Blue FCF as a Dye Tracer for Solute Transport Studies-A Toxicological Overview. Journal of Environmental Quality, 1994, 23, 1108-1112.	1.0	173
11	Transitory microbial habitat in the hyperarid Atacama Desert. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2670-2675.	3.3	172
12	Sorption of Brilliant Blue FCF in soils as affected by pH and ionic strength. Geoderma, 2000, 97, 87-101.	2.3	168
13	Reduction of transpiration through foliar application of chitosan. Agricultural and Forest Meteorology, 2001, 107, 167-175.	1.9	162
14	In situ degradation of biodegradable plastic mulch films in compost and agricultural soils. Science of the Total Environment, 2020, 727, 138668.	3.9	159
15	Impacts of biodegradable plastic mulches on soil health. Agriculture, Ecosystems and Environment, 2019, 273, 36-49.	2.5	156
16	Multifractal Characterization of Soil Particleâ€Size Distributions. Soil Science Society of America Journal, 2001, 65, 1361-1367.	1.2	155
17	Errors in Water Retention Curves Determined with Pressure Plates. Soil Science Society of America Journal, 2009, 73, 1453-1460.	1.2	149
18	Effects of pH, ionic strength, dissolved organic matter, and flow rate on the co-transport of MS2 bacteriophages with kaolinite in gravel aquifer media. Water Research, 2010, 44, 1255-1269.	5.3	140

#	Article	IF	Citations
19	Microbial activity affected by lime in a long-term no-till soil. Soil and Tillage Research, 2006, 88, 123-131.	2.6	139
20	Macro- and microplastic accumulation in soil after 32 years of plastic film mulching. Environmental Pollution, 2022, 300, 118945.	3.7	136
21	Fate and Transport of Viruses in Porous Media. Advances in Agronomy, 2002, 77, 39-102.	2.4	133
22	Hydraulic Properties in a Silt Loam Soil under Natural Prairie, Conventional Till, and Noâ€Till. Soil Science Society of America Journal, 2004, 68, 1679-1688.	1.2	127
23	Capillary bundle model of hydraulic conductivity for frozen soil. Water Resources Research, 2008, 44, .	1.7	124
24	Dependence of pesticide degradation on sorption: nonequilibrium model and application to soil reactors. Journal of Contaminant Hydrology, 2000, 43, 45-62.	1.6	123
25	Transport of Anions and Herbicides in a Loamy and a Sandy Field Soil. Water Resources Research, 1995, 31, 823-835.	1.7	117
26	Impact of flow rate, water content, and capillary forces on in situ colloid mobilization during infiltration in unsaturated sediments. Water Resources Research, 2008, 44, .	1.7	115
27	Alteration of Kaolinite to Cancrinite and Sodalite by Simulated Hanford Tank Waste and its Impact on Cesium Retention. Clays and Clay Minerals, 2004, 52, 1-13.	0.6	111
28	Mechanisms of virus removal during transport in unsaturated porous media. Water Resources Research, 2001, 37, 253-263.	1.7	107
29	Effect of biochar on leaching of organic carbon, nitrogen, and phosphorus from compost in bioretention systems. Science of the Total Environment, 2015, 521-522, 37-45.	3.9	106
30	Polystyrene nano- and microplastic accumulation at Arabidopsis and wheat root cap cells, but no evidence for uptake into roots. Environmental Science: Nano, 2020, 7, 1942-1953.	2.2	102
31	In Situ Mobilization of Colloids and Transport of Cesium in Hanford Sediments. Environmental Science & Technology, 2002, 36, 5335-5341.	4.6	101
32	Cesium incorporation and diffusion in cancrinite, sodalite, zeolite, and allophane. Microporous and Mesoporous Materials, 2005, 86, 277-286.	2.2	100
33	Longitudinal and lateral dispersion in an unsaturated field soil. Water Resources Research, 1999, 35, 3049-3060.	1.7	98
34	Retention of mineral colloids in unsaturated porous media as related to their surface properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 256, 207-216.	2.3	97
35	Detachment of colloids from a solid surface by a moving airâ€“water interface. Journal of Colloid and Interface Science, 2008, 326, 143-150.	5.0	95
36	Release of micro- and nanoparticles from biodegradable plastic during in situ composting. Science of the Total Environment, 2019, 675, 686-693.	3.9	94

#	Article	IF	Citations
37	In Situ Colloid Mobilization in Hanford Sediments under Unsaturated Transient Flow Conditions:Â Effect of Irrigation Pattern. Environmental Science & Technology, 2007, 41, 3199-3204.	4.6	92
38	Colloid-Facilitated Cs Transport through Water-Saturated Hanford Sediment and Ottawa Sand. Environmental Science & Technology, 2003, 37, 4905-4911.	4.6	87
39	Colloidal stability and aggregation kinetics of biochar colloids: Effects of pyrolysis temperature, cation type, and humic acid concentrations. Science of the Total Environment, 2019, 658, 1306-1315.	3.9	86
40	Use of dielectric spectroscopy to estimate ice content in frozen porous media. Water Resources Research, 2004, 40, .	1.7	85
41	Modeling the effect of biodegradable paper and plastic mulch on soil moisture dynamics. Agricultural Water Management, 2017, 193, 240-250.	2.4	85
42	Role of the Air-Water-Solid Interface in Bacteriophage Sorption Experiments. Applied and Environmental Microbiology, 1998, 64, 304-309.	1.4	84
43	Role of airâ€water interfaces in colloid transport in porous media: A review. Water Resources Research, 2017, 53, 5247-5275.	1.7	83
44	Effect of diverse weathering conditions on the physicochemical properties of biodegradable plastic mulches. Polymer Testing, 2017, 62, 454-467.	2.3	83
45	Simulation of water flow and solute transport in free-drainage lysimeters and field soils with heterogeneous structures. European Journal of Soil Science, 2004, 55, 229-241.	1.8	81
46	Modeling Colloidâ€Facilitated Contaminant Transport in the Vadose Zone. Vadose Zone Journal, 2008, 7, 682-697.	1.3	79
47	A thermodielectric analyzer to measure the freezing and moisture characteristic of porous media. Water Resources Research, 2003, 39, .	1.7	78
48	Intermittent rainstorms cause pulses of nitrogen, phosphorus, and copper in leachate from compost in bioretention systems. Science of the Total Environment, 2015, 537, 294-303.	3.9	78
49	Sampling and degradation of biodegradable plastic and paper mulches in field after tillage incorporation. Science of the Total Environment, 2020, 703, 135577.	3.9	76
50	Nutrient leaching and copper speciation in compost-amended bioretention systems. Science of the Total Environment, 2016, 556, 302-309.	3.9	72
51	Nitrate and colloid transport through coarse Hanford sediments under steady state, variably saturated flow. Water Resources Research, 2003, 39, .	1.7	70
52	Colloid-Facilitated Transport of Cesium in Variably Saturated Hanford Sediments. Environmental Science & Technology, 2005, 39, 3435-3442.	4.6	69
53	Interaction of Lumbricus terrestris with macroscopic polyethylene and biodegradable plastic mulch. Science of the Total Environment, 2018, 635, 1600-1608.	3.9	68
54	Contact angles of aluminosilicate clays as affected by relative humidity and exchangeable cations. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 353, 1-9.	2.3	66

#	Article	IF	Citations
55	Detachment of Deposited Colloids by Advancing and Receding Airâ€“Water Interfaces. Langmuir, 2011, 27, 9985-9993.	1.6	66
56	Competitive Incorporation of Perrhenate and Nitrate into Sodalite. Environmental Science & Technology, 2014, 48, 12851-12857.	4.6	66
57	Numerical Analysis of the Effect of the Lower Boundary Condition on Solute Transport in Lysimeters. Soil Science Society of America Journal, 1999, 63, 1493-1499.	1.2	64
58	Biodegradable plastic as an integral part of the solution to plastic waste pollution of the environment. Current Opinion in Green and Sustainable Chemistry, 2021, 30, 100490.	3.2	62
59	Adsorption and Desorption of Chlorpyrifos to Soils and Sediments. Reviews of Environmental Contamination and Toxicology, 2012, 215, 123-175.	0.7	61
60	Force measurements between particles and the airâ€“water interface: Implications for particle mobilization in unsaturated porous media. Water Resources Research, 2009, 45, .	1.7	60
61	Soil water and nitrogen dynamics in dryland cropping systems of Washington State, USA. Soil and Tillage Research, 2003, 71, 33-47.	2.6	59
62	Effect of naphthalene on transport and retention of biochar colloids through saturated porous media. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 530, 146-154.	2.3	59
63	Development and testing of a physically based, three-dimensional model of surface and subsurface hydrology. Advances in Water Resources, 2010, 33, 106-122.	1.7	58
64	Poor extraction efficiencies of polystyrene nano- and microplastics from biosolids and soil. PLoS ONE, 2018, 13, e0208009.	1.1	58
65	Surface and colloid properties of biochar and implications for transport in porous media. Critical Reviews in Environmental Science and Technology, 2020, 50, 2484-2522.	6.6	56
66	Colloid Formation in Hanford Sediments Reacted with Simulated Tank Waste. Environmental Science & Technology, 2004, 38, 5750-5756.	4.6	51
67	Cancrinite and sodalite formation in the presence of cesium, potassium, magnesium, calcium and strontium in Hanford tank waste simulants. Applied Geochemistry, 2006, 21, 2049-2063.	1.4	50
68	Does Water Content or Flow Rate Control Colloid Transport in Unsaturated Porous Media?. Environmental Science & Technology, 2014, 48, 3791-3799.	4.6	49
69	Four years of continuous use of soil-biodegradable plastic mulch: impact on soil and groundwater quality. Geoderma, 2021, 381, 114665.	2.3	49
70	Groundwater Contamination with NO3-N in a Wheat-Corn Cropping System in the North China Plain. Pedosphere, 2007, 17, 721-731.	2.1	48
71	Does Colloid Shape Affect Detachment of Colloids by a Moving Airâ€“Water Interface?. Langmuir, 2013, 29, 5770-5780.	1.6	48
72	Cesium migration in saturated silica sand and Hanford sediments as impacted by ionic strength. Journal of Contaminant Hydrology, 2004, 71, 111-126.	1.6	47

#	Article	IF	Citations
73	Mineral formation during simulated leaks of Hanford waste tanks. Applied Geochemistry, 2006, 21, 1392-1409.	1.4	46
74	Water Infiltration into a Frozen Soil with Simultaneous Melting of the Frozen Layer. Vadose Zone Journal, 2013, 12, vzj2011.0188.	1.3	45
75	Long-term depletion of selenium from Kesterson dewatered sediments. Science of the Total Environment, 1997, 198, 259-270.	3.9	43
76	In-field degradation of soil-biodegradable plastic mulch films in a Mediterranean climate. Science of the Total Environment, 2022, 806, 150238.	3.9	43
77	Effect of Particle Shape on Capillary Forces Acting on Particles at the Airâ€“Water Interface. Langmuir, 2013, 29, 7903-7911.	1.6	42
78	Agronomic performance of polyethylene and biodegradable plastic film mulches in a maize cropping system in a humid continental climate. Science of the Total Environment, 2021, 786, 147460.	3.9	42
79	Comparison of Hanford Colloids and Kaolinite Transport in Porous Media. Vadose Zone Journal, 2004, 3, 395-402.	1.3	41
80	Modeling Solute Leaching in Soils by Diffusion-Limited Aggregation: Basic Concepts and Application to Conservative Solutes. Water Resources Research, 1995, 31, 2443-2452.	1.7	38
81	Cesium Desorption from Illite as Affected by Exudates from Rhizosphere Bacteria. Environmental Science & Technology, 2005, 39, 4505-4512.	4.6	37
82	Coupling the Xinanjiang model to a kinematic flow model based on digital drainage networks for flood forecasting. Hydrological Processes, 2009, 23, 1337-1348.	1.1	37
83	Capillary Forces between Sediment Particles and an Airâ€“Water Interface. Environmental Science & Technology, 2012, 46, 4411-4418.	4.6	37
84	Effect of sulfamethazine on surface characteristics of biochar colloids and its implications for transport in porous media. Environmental Pollution, 2020, 256, 113482.	3.7	36
85	Effect of the Lower Boundary Condition and Flotation on Colloid Mobilization in Unsaturated Sandy Sediments. Vadose Zone Journal, 2008, 7, 930-940.	1.3	34
86	Lysimeters in Vadose Zone Research. Vadose Zone Journal, 2018, 17, 1-4.	1.3	34
87	Permeability changes during remediation of an aquifer affected by sea-water intrusion: A laboratory column study. Journal of Hydrology, 2009, 376, 557-566.	2.3	33
88	Transport of barrel and spherical shaped colloids in unsaturated porous media. Journal of Contaminant Hydrology, 2015, 180, 69-79.	1.6	33
89	Current understanding of subsurface transport of microâ€•and nanoplastics in soil. Vadose Zone Journal, 2021, 20, e20108.	1.3	33
90	Rate-limited sorption of simazine in saturated soil columns. Journal of Contaminant Hydrology, 1997, 25, 219-234.	1.6	32

#	Article	IF	Citations
91	Biodegradable Plastic Mulch Films for Sustainable Specialty Crop Production. , 2019, , 183-213.		32
92	Humic acid-, ferrihydrite-, and aluminosilicate-coated sands for column transport experiments. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2006, 273, 90-96.	2.3	31
93	Colloid Stability in Vadose Zone Hanford Sediments. Environmental Science & Technology, 2005, 39, 1506-1512.	4.6	28
94	Sorption of four triarylmethane dyes in a sandy soil determined by batch and column experiments. Geoderma, 2006, 133, 217-224.	2.3	28
95	Transport of Strontium and Cesium in Simulated Hanford Tank Waste Leachate through Quartz Sand under Saturated and Unsaturated Flow. Environmental Science & Technology, 2010, 44, 8089-8094.	4.6	28
96	Impact of Agricultural Weathering on Physicochemical Properties of Biodegradable Plastic Mulch Films: Comparison of Two Diverse Climates Over Four Successive Years. Journal of Polymers and the Environment, 2021, 29, 1-16.	2.4	28
97	Cesium Sorption to Illite as Affected by Oxalate. Clays and Clay Minerals, 2004, 52, 375-381.	0.6	27
98	Nonsingular Adsorption/Desorption of Chlorpyrifos in Soils and Sediments: Experimental Results and Modeling. Environmental Science & Technology, 2012, 46, 869-875.	4.6	26
99	Effect of biochar and biochar particle size on plant-available water of sand, silt loam, and clay soil. Soil and Tillage Research, 2021, 212, 104992.	2.6	26
100	Analysis of precipitates from reactions of hyperalkaline solutions with soluble silica. Applied Geochemistry, 2005, 20, 1357-1367.	1.4	25
101	Coating of silica sand with aluminosilicate clay. Journal of Colloid and Interface Science, 2006, 294, 155-164.	5.0	24
102	Colloid Mobilization and Transport during Capillary Fringe Fluctuations. Environmental Science & Technology, 2014, 48, 7272-7279.	4.6	24
103	Analytical solution for solute transport with depth-dependent transformation or sorption coefficients. Water Resources Research, 1998, 34, 2931-2937.	1.7	23
104	Studying colloid transport in porous media using a geocentrifuge. Water Resources Research, 2008, 44, .	1.7	23
105	Sprayable Biodegradable Polymer Membrane Technology for Cropping Systems: Challenges and Opportunities. Environmental Science & Technology, 2020, 54, 4709-4711.	4.6	23
106	Immobilization and exchange of perrhenate in sodalite and cancrinite. Microporous and Mesoporous Materials, 2015, 214, 115-120.	2.2	22
107	Microbial Hotspots in Lithic Microhabitats Inferred from DNA Fractionation and Metagenomics in the Atacama Desert. Microorganisms, 2021, 9, 1038.	1.6	19
108	Water Vapor Diffusion through Wheat Straw Residue. Soil Science Society of America Journal, 2009, 73, 37-45.	1.2	18

#	Article	IF	Citations
109	Carbon dioxide and oxygen exchange at the soil-atmosphere boundary as affected by various mulch materials. Soil and Tillage Research, 2019, 194, 104335.	2.6	18
110	Does long-term use of biodegradable plastic mulch affect soil carbon stock?. Resources, Conservation and Recycling, 2021, 175, 105895.	5.3	18
111	Transport of Europium Colloids in Vadose Zone Lysimeters at the Semiarid Hanford Site. Environmental Science & Technology, 2013, 47, 2153-2160.	4.6	17
112	Clay Mineralogical Transformations over Time in Hanford Sediments Reacted with Simulated Tank Waste. Soil Science Society of America Journal, 2005, 69, 531-538.	1.2	15
113	A quantitative structureâ€“activity relationships (QSAR) analysis of triarylmethane dye tracers. Journal of Hydrology, 2006, 316, 84-97.	2.3	14
114	How to take representative samples to quantify microplastic particles in soil?. Science of the Total Environment, 2021, 784, 147166.	3.9	14
115	Are micro- and nanoplastics from soil-biodegradable plastic mulches an environmental concern?. Journal of Hazardous Materials Advances, 2021, 4, 100024.	1.2	14
116	End-of-Life Management Options for Agricultural Mulch Films in the United Statesâ€”A Review. Frontiers in Sustainable Food Systems, 0, 6, .	1.8	14
117	Suitability of Fiberglass Wicks to Sample Colloids from Vadose Zone Pore Water. Vadose Zone Journal, 2005, 4, 175-183.	1.3	13
118	Critical water potentials for germination of wheat cultivars in the dryland Northwest USA. Seed Science Research, 2013, 23, 189-198.	0.8	12
119	Environmental impacts of agricultural plastic film mulch: Fate, consequences, and solutions. Science of the Total Environment, 2022, 836, 155668.	3.9	12
120	Colloid mobilization in an undisturbed sediment core under semiarid recharge rates. Water Resources Research, 2013, 49, 4985-4996.	1.7	10
121	Soil-Biodegradable Plastic Mulches Undergo Minimal in-Soil Degradation in a Perennial Raspberry System after 18 Months. Horticulturae, 2020, 6, 47.	1.2	10
122	PAHs sorption to biochar colloids changes their mobility over time. Journal of Hydrology, 2021, 603, 126839.	2.3	10
123	Sampling Silica and Ferrihydrite Colloids with Fiberglass Wicks under Unsaturated Conditions. Journal of Environmental Quality, 2006, 35, 1127-1134.	1.0	9
124	DLVO Interaction Energies for Hollow Particles: The Filling Matters. Langmuir, 2018, 34, 12764-12775.	1.6	9
125	Variability of Solute Transport in Field Lysimeters. ACS Symposium Series, 1998, , 65-75.	0.5	7
126	6.6 Solute Transport During Variably Saturated Flow-Inverse Methods. Soil Science Society of America Book Series, 0, , 1435-1449.	0.3	7

#	Article	IF	Citations
127	Connecting wettability, topography, and chemistry in a simple lipid-montmorillonite system. Journal of Colloid and Interface Science, 2019, 555, 498-508.	5.0	7
128	Comparison of Hanford Colloids and Kaolinite Transport in Porous Media. Vadose Zone Journal, 2004, 3, 395-402.	1.3	7
129	Predicting seed-zone water content for summer fallow in the Inland Pacific Northwest, USA. Soil and Tillage Research, 2011, 115-116, 94-104.	2.6	6
130	Longâ€term accumulation, depth distribution, and speciation of silver nanoparticles in biosolidsâ€amended soils. Journal of Environmental Quality, 2020, 49, 1679-1689.	1.0	6
131	Enhanced Transport of TiO₂ in Unsaturated Sand and Soil after Release from Biodegradable Plastic during Composting. Environmental Science & Technology, 2022, 56, 2398-2406.	4.6	6
132	Rhizosphere Effects on Cesium Fixation Sites of Soil Containing Micaceous Clays. Soil Science Society of America Journal, 2005, 69, 1652-1657.	1.2	5
133	Effects of freezingâ€“thawing and wettingâ€“drying on heavy metal leaching from biosolids. Water Environment Research, 2019, 91, 465-474.	1.3	5
134	Diffusive release of uranium from contaminated sediments into capillary fringe pore water. Journal of Contaminant Hydrology, 2012, 140-141, 164-172.	1.6	4
135	Theoretical Analysis of Engineered Plants for Control of Atmospheric Nitrous Oxide and Methane by Modification of the Mitochondrial Proteome. ACS Sustainable Chemistry and Engineering, 2022, 10, 5441-5452.	3.2	4
136	Miscible displacement of salinity fronts: Implications for colloid mobilization. Water Resources Research, 2003, 39, .	1.7	3
137	Characterization of a spiral-shaped time domain reflectometry probe. Water Resources Research, 2004, 40, .	1.7	3
138	Suitability of Fiberglass Wicks to Sample Colloids from Vadose Zone Pore Water. Vadose Zone Journal, 2005, 4, 175-183.	1.3	3
139	Translocation of fluoranthene in porous media by advancing and receding airâ€“water interfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 492, 62-70.	2.3	3
140	Transport Mechanisms of Motile and Nonmotile Phytophthora cactorum Zoospores in Unsaturated Porous Media. Water Resources Research, 2021, 57, e2020WR028249.	1.7	3
141	Solute transport with residence-time-dependent sink/source reaction coefficients. Water Resources Research, 1999, 35, 1933-1938.	1.7	2
142	Special Issue on fate and transport of biocolloids and nanoparticles in soil and groundwater systems. Journal of Contaminant Hydrology, 2015, 181, 1-2.	1.6	2
143	Negatively Charged Lipids Exhibit Negligible Effects on the Water Repellency of Montmorillonite Films. ACS Omega, 2020, 5, 12154-12161.	1.6	2
144	Alteration of Kaolinite to Cancrinite and Sodalite by Simulated Hanford Tank Waste and its Impact on Cesium Retention. , 2004, 52, 1.		2

#	Article	IF	Citations
145	Morphology of Lipid Aggregates on Clay Minerals and Connections to Macroscopic Wettability. Biophysical Journal, 2019, 116, 367a.	0.2	0
146	20 years of Vadose Zone Journal. Vadose Zone Journal, 2021, 20, e20141.	1.3	0