Michael Kersten

List of Publications by Year
in descending order

113 papers	4,975 citations	101543 36 h-index	98798 67 g-index
132 all docs	132 docs citations	132 times ranked	4836 citing authors

#	Article	IF	Citations
1	Benchmarking conventional and machine learning segmentation techniques for digital rock physics analysis of fractured rocks. Environmental Earth Sciences, 2022, 81, 1.	2.7	16
2	Cadmium isotope fractionation in an intertidal soil induced by tidal pumping. Environmental Advances, 2022, 8, 100182.	4.8	1
3	A FIB-SEM Study of Illite Morphology in Aeolian Rotliegend Sandstones: Implications for Understanding the Petrophysical Properties of Reservoir Rocks. Clays and Clay Minerals, 2022, 70, 84-105.	1.3	3
4	Aqueous solubility of Zn incorporated into Mg-Al-layered double hydroxides. Clays and Clay Minerals, 2022, 70, 34-47.	1.3	0
5	Upscaling calcite dissolution rates in a tight reservoir sandstone. Environmental Earth Sciences, 2022, 81, .	2.7	3
6	Predicting the Breakthrough of Ternary Caâ€“Uranylâ€“Carbonate Species in Mineral Water Treated by a Fixed-Bed Granular Ferric Hydroxide Adsorbent. ACS ES&T Water, 2021, 1, 366-375.	4.6	6
7	Chronospeciation of uranium released in soil during a long-term DU shell weathering experiment. Journal of Environmental Radioactivity, 2021, 228, 106511.	1.7	5
8	Applied Geochemistry. , 2021, , 323-326.		0
9	Comment on â€œEnthalpy of Uranium Adsorption onto Hematiteâ€• Environmental Science & Technology, 2021, 55, 3442-3443.	10.0	5
10	Polycyclic aromatic hydrocarbons (PAHs) in soils of an industrial area in semi-arid Uzbekistan: spatial distribution, relationship with trace metals and risk assessment. Environmental Geochemistry and Health, 2021, 43, 4847-4861.	3.4	29
11	The Origin of Non-thermal Fluctuations in Multiphase Flow in Porous Media. Frontiers in Water, 2021, 3, .	2.3	19
12	Competitive arsenate and phosphate adsorption on Î±-FeOOH, LaOOH, and nano-TiO2: Two-dimensional correlation spectroscopy study. Journal of Hazardous Materials, 2021, 414, 125512.	12.4	26
13	Digital rock physics, chemistry, and biology: challenges and prospects of pore-scale modelling approach. Applied Geochemistry, 2021, 131, 105028.	3.0	43
14	Relationship Between Microbial Growth and Hydraulic Properties at the Sub-Pore Scale. Transport in Porous Media, 2021, 139, 579-593.	2.6	13
15	Simulating permeability reduction by clay mineral nanopores in a tight sandstone by combining computer X-ray microtomography and focussed ion beam scanning electron microscopy imaging. Solid Earth, 2021, 12, 1-14.	2.8	20
16	Predicting breakthrough of vanadium in fixed-bed absorbent columns with complex groundwater chemistries: A multi-component granular ferric hydroxideâˆ’vanadateâˆ’arsenateâˆ’phosphateâˆ’silicic acid system. Water Research X, 2020, 9, 100061.	6.1	9
17	Molecular modeling of MCPA herbicide adsorption by goethite (110) surface in dependence of pH. Theoretical Chemistry Accounts, 2020, 139, 1.	1.4	3
18	Exothermic adsorption of chromate by goethite. Applied Geochemistry, 2020, 123, 104785.	3.0	15

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19	Incorporation of trace metals Cu, Zn, and Cd into gypsum: Implication on their mobility and fate in natural and anthropogenic environments. Chemical Geology, 2020, 541, 119574.	3.3	13
20	Pore scale modelling of calcite cement dissolution in a reservoir sandstone matrix. E3S Web of Conferences, 2019, 98, 05010.	0.5	6
21	LFER and the Effect of Temperature on Oxyanion Adsorption by Goethite. E3S Web of Conferences, 2019, 98, 10001.	0.5	2
22	Analysis of Variance of Porosity and Heterogeneity of Permeability at the Pore Scale. Transport in Porous Media, 2019, 130, 867-887.	2.6	9
23	Stratification Dynamics and Geothermal Potential of a Deep Shaft in the Flooded Wolf Mine, Siegerland/Germany. Mine Water and the Environment, 2019, 38, 325-334.	2.0	3
24	Low-Molecular-Weight Organic Acid Complexation Affects Antimony(III) Adsorption by Granular Ferric Hydroxide. Environmental Science & Technology, 2019, 53, 5221-5229.	10.0	31
25	Presence of polycyclic aromatic hydrocarbons in sediments and surface water from Shadegan wetland â€“ Iran: A focus on source apportionment, human and ecological risk assessment and Sediment-Water Exchange. Ecotoxicology and Environmental Safety, 2018, 148, 1054-1066.	6.0	77
26	Trace metal(loid) mobility in waste deposits and soils around Chadak mining area, Uzbekistan. Science of the Total Environment, 2018, 622-623, 1658-1667.	8.0	10
27	Change of arsenite adsorption mechanism during aging of 2-line ferrihydrite in the absence of oxygen. Applied Geochemistry, 2018, 88, 149-157.	3.0	19
28	Squirt flow due to interfacial water films in hydrate bearing sediments. Solid Earth, 2018, 9, 699-711.	2.8	13
29	Time-lapse 3D imaging by positron emission tomography of Cu mobilized in a soil column by the herbicide MCPA. Scientific Reports, 2018, 8, 7091.	3.3	18
30	Multi-phase classification by a least-squares support vector machine approach in tomography images of geological samples. Solid Earth, 2016, 7, 481-492.	2.8	14
31	On the path to the digital rock physics of gas hydrate-bearing sediments â€“ processing of in situ synchrotron-tomography data. Solid Earth, 2016, 7, 1243-1258.	2.8	56
32	Connected pathway relative permeability from pore-scale imaging of imbibition. Advances in Water Resources, 2016, 90, 24-35.	3.8	113
33	Processing of rock core microtomography images: Using seven different machine learning algorithms. Computers and Geosciences, 2016, 86, 120-128.	4.2	80
34	From connected pathway flow to ganglion dynamics. Geophysical Research Letters, 2015, 42, 3888-3894.	4.0	204
35	Microstructure of hydrate-bearing sediments and determination of P-wave velocities based on high-resolution synchrotron tomographic data. , 2015, , .		3
36	Stop-and-goin situtomography of dynamic processes â€“ gas hydrate formation in sedimentary matrices. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s154-s154.	0.1	6

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37	Mineral precipitation-induced porosity reduction and its effect on transport parameters in diffusion-controlled porous media. Geochemical Transactions, 2015, 16, 13.	0.7	40
38	Microstructural evolution of gas hydrates in sedimentary matrices observed with synchrotron <scp>X</scp>â€ray computed tomographic microscopy. Geochemistry, Geophysics, Geosystems, 2015, 16, 1711-1722.	2.5	208
39	Silicic acid competes for dimethylarsinic acid (DMA) immobilization by the iron hydroxide plaque mineral goethite. Science of the Total Environment, 2015, 508, 199-205.	8.0	10
40	Fast X-ray Micro-Tomography of Multiphase Flow in Berea Sandstone: A Sensitivity Study on Image Processing. Transport in Porous Media, 2014, 105, 451-469.	2.6	115
41	Coupling geochemical, mineralogical and microbiological approaches to assess the health of contaminated soil around the Almalyk mining and smelter complex, Uzbekistan. Science of the Total Environment, 2014, 476-477, 447-459.	8.0	36
42	Comparison of Micro X-ray Computer Tomography Image Segmentation Methods: Artificial Neural Networks Versus Least Square Support Vector Machine. Lecture Notes in Earth System Sciences, 2014, , 141-145.	0.6	0
43	Adsorption of the Herbicide 4-Chloro-2-methylphenoxyacetic Acid (MCPA) by Goethite. Environmental Science & Technology, 2014, 48, 11803-11810.	10.0	38
44	Tracing Anthropogenic Thallium in Soil Using Stable Isotope Compositions. Environmental Science & Technology, 2014, 48, 9030-9036.	10.0	52
45	Successive development of soil ecosystems at abandoned coal-ash landfills. Ecotoxicology, 2014, 23, 880-897.	2.4	12
46	Surface complexation modeling of arsenate adsorption by akagenÃ©ite (Î²-FeOOH)-dominant granular ferric hydroxide. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 448, 73-80.	4.7	34
47	The influence of temperature on selenate adsorption by goethite. Radiochimica Acta, 2013, 101, 413-420.	1.2	14
48	Mobility of Cr and V in Spent Oil Shale: Impact of Thermal Treatment. Procedia Earth and Planetary Science, 2013, 7, 413-416.	0.6	1
49	Simultaneous segmentation and beam-hardening correction in computed microtomography of rock cores. Computers and Geosciences, 2013, 56, 142-150.	4.2	25
50	Microtomographic Quantification of Hydraulic Clay Mineral Displacement Effects During a CO2 Sequestration Experiment with Saline Aquifer Sandstone. Environmental Science & Technology, 2013, 47, 198-204.	10.0	26
51	Real-time 3D imaging of Haines jumps in porous media flow. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3755-3759.	7.1	490
52	Isotopes Trace Biogeochemistry and Sources of Cu and Zn in an intertidal soil. Soil Science Society of America Journal, 2013, 77, 680-691.	2.2	30
53	CO2 Injection to a Saline Aquifer Sandstone - Clay Mineral Displacement and Permeability Changes. , 2013, , .		1
54	On the Effect of Image Enhancement Techniques on Digital Rock Physics Results. , 2013, , .		1

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55	Microstructure characteristics during hydrate formation and dissociation revealed by X-ray tomographic microscopy. Geo-Marine Letters, 2012, 32, 555-562.	1.1	29
56	Advanced spectroscopic, microscopic, and tomographic characterization techniques to study biogeochemical interfaces in soil. Journal of Soils and Sediments, 2012, 12, 3-23.	3.0	34
57	3D simulation of the permeability tensor in a soil aggregate on basis of nanotomographic imaging and LBE solver. Journal of Soils and Sediments, 2012, 12, 86-96.	3.0	73
58	Polycyclic aromatic hydrocarbons and trace metal contamination of coastal sediment and biota from Togo. Journal of Environmental Monitoring, 2011, 13, 2033.	2.1	25
59	Cr(VI)/Cr(III) and As(V)/As(III) Ratio Assessments in Jordanian Spent Oil Shale Produced by Aerobic Combustion and Anaerobic Pyrolysis. Environmental Science & Technology, 2011, 45, 9799-9805.	10.0	18
60	3-D imaging and quantification of graupel porosity by synchrotron-based micro-tomography. Atmospheric Measurement Techniques, 2011, 4, 2225-2234.	3.1	5
61	Speciation of Copper in Enriched Agricultural Lime. Soil Science Society of America Journal, 2011, 75, 509-520.	2.2	2
62	Polycyclic aromatic hydrocarbons (PAHs) and their oxygen-containing derivatives (OPAHs) in soils from the Angren industrial area, Uzbekistan. Environmental Pollution, 2010, 158, 2888-2899.	7.5	93
63	Microfungal Alkylation and Volatilization of Selenium Adsorbed by Goethite. Environmental Science & Technology, 2010, 44, 129-135.	10.0	24
64	Speciation and Mobility of Arsenic in Agricultural Lime. Journal of Environmental Quality, 2009, 38, 2058-2069.	2.0	8
65	Thorium-234 derived information on particle residence times and sediment deposition in shallow waters of the south-western Baltic Sea. Journal of Marine Systems, 2009, 75, 360-370.	2.1	5
66	Soil biogeochemical properties of Angren industrial area, Uzbekistan. Journal of Soils and Sediments, 2009, 9, 206-215.	3.0	13
67	Silicate adsorption by goethite at elevated temperatures. Chemical Geology, 2009, 262, 336-343.	3.3	25
68	Arsenite adsorption on goethite at elevated temperatures. Applied Geochemistry, 2009, 24, 32-43.	3.0	45
69	Adsorption mechanism of arsenate by zirconyl-functionalized activated carbon. Journal of Colloid and Interface Science, 2008, 317, 228-234.	9.4	48
70	Natural gas hydrate investigations by synchrotron radiation Xâ€ray cryoâ€tomographic microscopy (SRXCTM). Geophysical Research Letters, 2008, 35, .	4.0	46
71	Ba and Ni speciation in a nodule of binary Mn oxide phase composition from Lake Baikal. Geochimica Et Cosmochimica Acta, 2007, 71, 1967-1981.	3.9	73
72	Section 1: Sediment quality and impact assessment. Journal of Soils and Sediments, 2007, 7, 197-197.	3.0	3

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73	Modeling of Elemental Species. , 2005, , 651-689.		2
74	Competitive Scavenging of Trace Metals by HFO and HMO during Redox-driven Early Diagenesis of Ferromanganese Nodules (11 pp). Journal of Soils and Sediments, 2005, 5, 37-47.	3.0	8
75	Ecotoxicity assessment of natural attenuation effects at a historical dumping site in the western Baltic Sea. Marine Pollution Bulletin, 2005, 50, 446-459.	5.0	42
76	Storm Disturbance of Sediment Contaminants at a Hot-Spot in the Baltic Sea Assessed by234Th Radionuclide Tracer Profiles. Environmental Science & Technology, 2005, 39, 984-990.	10.0	22
77	Detection of a Ca-rich lithology in the Earth's deep (>300 km) convecting mantle. Earth and Planetary Science Letters, 2005, 236, 579-587.	4.4	90
78	Three-Dimensional Trace Element Analysis by Confocal X-ray Microfluorescence Imaging. Analytical Chemistry, 2004, 76, 6786-6791.	6.5	237
79	Mn, Fe, Zn and As speciation in a fast-growing ferromanganese marine nodule. Geochimica Et Cosmochimica Acta, 2004, 68, 3125-3136.	3.9	142
80	Aqueous Solubility Diagrams for Cementitious Waste Stabilization Systems. 3. Mechanism of Zinc Immobilizaton by Calcium Silicate Hydrate. Environmental Science & Technology, 2002, 36, 2919-2925.	10.0	67
81	Aqueous Solubility Diagrams for Cementitious Waste Stabilization Systems. 4. A Carbonation Model for Zn-Doped Calcium Silicate Hydrate by Gibbs Energy Minimization. Environmental Science & Technology, 2002, 36, 2926-2931.	10.0	31
82	Normalization procedures for sediment contaminants in spatial and temporal trend monitoring. Journal of Environmental Monitoring, 2002, 4, 109-115.	2.1	154
83	Early diagenetic processes during Mn-carbonate formation: evidence from the isotopic composition of authigenic Ca-rhodochrosites of the Baltic Sea. Geochimica Et Cosmochimica Acta, 2002, 66, 867-879.	3.9	87
84	Trace metal fluxes to ferromanganese nodules from the western Baltic Sea as a record for long-term environmental changes. Chemical Geology, 2002, 182, 697-709.	3.3	51
85	Fast-growing, shallow-water ferro-manganese nodules from the western Baltic Sea: origin and modes of trace element incorporation. Marine Geology, 2002, 182, 373-387.	2.1	43
86	Speciation and oxidation kinetics of arsenic in the thermal springs of Wiesbaden spa, Germany. Fresenius' Journal of Analytical Chemistry, 2001, 371, 927-933.	1.5	29
87	Aqueous Solubility Diagrams for Cementitious Waste Stabilization Systems: II, Endâ€Member Stoichiometries of Ideal Calcium Silicate Hydrate Solid Solutions. Journal of the American Ceramic Society, 2001, 84, 3017-3026.	3.8	147
88	Speziierung von Eisen in Brackwassersedimenten der Ostseebodden. , 2001, , 141-166.		0
89	Title is missing!. Aquatic Geochemistry, 2000, 6, 147-199.	1.3	40
90	Solubility of Zn(II) in Association with Calcium Silicate Hydrates in Alkaline Solutions. Environmental Science & Technology, 1999, 33, 2296-2298.	10.0	29

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91	Scavenging and particle residence times determined from 234Th/238U disequilibria in the coastal waters of Mecklenburg Bay. Applied Geochemistry, 1998, 13, 339-347.	3.0	30
92	Speciation of Cr in Leachates of a MSWI Bottom Ash Landfill. Environmental Science & Technology, 1998, 32, 1398-1403.	10.0	33
93	Methoden der Gewinnung geochemischer Parameter. , 1998, , 107-358.		0
94	Source Apportionment of Pb Pollution in the Coastal Waters of Elefsis Bay, Greece. Environmental Science & Technology, 1997, 31, 1295-1301.	10.0	61
95	Speciation of trace metals in leachate from a MSWI bottom ash landfill. Applied Geochemistry, 1997, 12, 675-683.	3.0	38
96	Aqueous Solubility Diagrams for Cementitious Waste Stabilization Systems. 1. The C-S-H Solid-Solution System. Environmental Science & Technology, 1996, 30, 2286-2293.	10.0	48
97	Leaching behaviour and solubility â€" Controlling solid phases of heavy metals in municipal solid waste incinerator ash. Waste Management, 1996, 16, 129-134.	7.4	103
98	Trace metals in humic acids from recent Skagerrak sediments. Marine Pollution Bulletin, 1994, 28, 143-147.	5.0	12
99	Combined Effects of Abiotic and Biotic Factors on Heavy Metal Fluxes. , 1994, , 598-619.		6
100	Background Concentrations for Metals in the North Sea: Sediment, Water, Mussels and Atmosphere. , 1994, , 290-316.		8
101	Determination of 206/207Pb isotope ratios by ICP-MS in particulate matter from the north sea environment. Fresenius' Journal of Analytical Chemistry, 1993, 347, 324-329.	1.5	35
102	Artifacts in the Determination of Trace Metal Binding Forms in Anoxic Sediments by Sequential Extraction. International Journal of Environmental Analytical Chemistry, 1993, 51, 187-200.	3.3	73
103	Distribution and Fate of Heavy Metals in the North Sea. , 1993, , 300-347.		17
104	Cadmium in the North Seaâ€"a mass balance. Journal of Marine Systems, 1992, 3, 209-224.	2.1	9
105	Partitioning of trace metals released from polluted marine aerosols in coastal seawater. Marine Chemistry, 1991, 36, 165-182.	2.3	45
106	Geochemical characterization of the potential trace metal mobility in cohesive sediments. Geo-Marine Letters, 1991, 11, 184-187.	1.1	36
107	Sediment Criteria Development. , 1990, , 311-338.		88
108	Assessment of Metal Mobility in Sludges and Solid Wastes. , 1990, , 1-41.		7

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109	Geochemistry of Priority Pollutants in Anoxic Sludges: Cadmium, Arsenic, Methyl Mercury, and Chlorinated Organics. , 1988, , 170-213.		20
110	Assessment of Metal Mobility in Dredged Material and Mine Waste by Pore Water Chemistry and Solid Speciation. , 1988, , 214-237.		25
111	Effect of sample pretreatment on the reliability of solid speciation data of heavy metals â€" implications sesfor the study of early diagenetic processes. Marine Chemistry, 1987, 22, 299-312.	2.3	119
112	Chemical Fractionation of Heavy Metals in Anoxic Estuarine and Coastal Sediments. Water Science and Technology, 1986, 18, 121-130.	2.5	299
113	Metal associations in anoxic sediments and changes following upland disposalâ€. Toxicological and Environmental Chemistry, 1986, 12, 313-321.	1.2	7