Markus Kleber

List of Publications by Year
in descending order

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100 papers	21,828 citations	43973 48 h-index	34900 98 g-index
102 all docs	102 docs citations	102 times ranked	17444 citing authors

#	Article	IF	Citations
1	Carbon stocks in umbric ferralsols driven by plant productivity and geomorphic processes, not by mineral protection. Earth Surface Processes and Landforms, 2022, 47, 491-508.	1.2	5
2	The Important Role of Enzyme Adsorbing Capacity of Soil Minerals in Regulating Î²â€Glucosidase Activity. Geophysical Research Letters, 2022, 49, .	1.5	15
3	Response to â€˜Stochastic and deterministic interpretation of pool modelsâ€™. Global Change Biology, 2021, 27, e11-e12.	4.2	1
4	Dynamic interactions at the mineralâ€“organic matter interface. Nature Reviews Earth & Environment, 2021, 2, 402-421.	12.2	301
5	Redox Properties of Pyrogenic Dissolved Organic Matter (pyDOM) from Biomass-Derived Chars. Environmental Science & Technology, 2021, 55, 11434-11444.	4.6	21
6	Response to â€œConnectivity and pore accessibility in models of soil carbon cyclingâ€• Global Change Biology, 2021, 27, e15-e16.	4.2	0
7	From pools to flow: The PROMISE framework for new insights on soil carbon cycling in a changing world. Global Change Biology, 2020, 26, 6631-6643.	4.2	57
8	Persistence of soil organic carbon caused by functional complexity. Nature Geoscience, 2020, 13, 529-534.	5.4	363
9	Macronutrient in soils and wheat from long-term agroexperiments reflects variations in residue and fertilizer inputs. Scientific Reports, 2020, 10, 3263.	1.6	14
10	Micronutrient Concentrations in Soil and Wheat Decline by Long-Term Tillage and Winter Wheatâ€“Pea Rotation. Agronomy, 2019, 9, 359.	1.3	6
11	Reply to â€œComment on â€˜Humic Substances Extracted by Alkali Are Invalid Proxies for the Dynamics and Functions of Organic Matter in Terrestrial and Aquatic Ecosystems,â€™ by Kleber and Lehmann (2019)â€• Journal of Environmental Quality, 2019, 48, 790-791.	1.0	0
12	Micronutrients in the Soil and Wheat: Impact of 84 Years of Organic or Synthetic Fertilization and Crop Residue Management. Agronomy, 2019, 9, 464.	1.3	9
13	Micronutrients decline under long-term tillage and nitrogen fertilization. Scientific Reports, 2019, 9, 12020.	1.6	14
14	Contribution of different catalytic types of peptidases to soil proteolytic activity. Soil Biology and Biochemistry, 2019, 138, 107578.	4.2	9
15	Macronutrients in Soil and Wheat as Affected by a Long-Term Tillage and Nitrogen Fertilization in Winter Wheatâ€“Fallow Rotation. Agronomy, 2019, 9, 178.	1.3	17
16	Effect of tillage on macronutrients in soil and wheat of a long-term dryland wheat-pea rotation. Soil and Tillage Research, 2019, 190, 194-201.	2.6	16
17	Humic Substances Extracted by Alkali Are Invalid Proxies for the Dynamics and Functions of Organic Matter in Terrestrial and Aquatic Ecosystems. Journal of Environmental Quality, 2019, 48, 207-216.	1.0	124
18	Mineral Surfaces as Agents of Environmental Proteolysis: Mechanisms and Controls. Environmental Science & Technology, 2019, 53, 3018-3026.	4.6	11

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19	Carbon Sink Strength of Subsurface Horizons in Brazilian Oxisols. Soil Science Society of America Journal, 2018, 82, 76-86.	1.2	1
20	Carbohydrates protect protein against abiotic fragmentation by soil minerals. Scientific Reports, 2018, 8, 813.	1.6	13
21	Differential capacity of kaolinite and birnessite to protect surface associated proteins against thermal degradation. Soil Biology and Biochemistry, 2018, 119, 101-109.	4.2	8
22	Quantifying biogeochemical heterogeneity in soil systems. Geoderma, 2018, 324, 89-97.	2.3	23
23	The Ability of Soil Pore Network Metrics to Predict Redox Dynamics is Scale Dependent. Soil Systems, 2018, 2, 66.	1.0	16
24	Demonstration of the rapid incorporation of carbon into protective, mineral-associated organic carbon fractions in an eroded soil from the CarboZALF experimental site. Plant and Soil, 2018, 430, 329-348.	1.8	9
25	Biopolymers and Macromolecules. Encyclopedia of Earth Sciences Series, 2018, , 148-153.	0.1	0
26	Sorption of Fluorotelomer Sulfonates, Fluorotelomer Sulfonamido Betaines, and a Fluorotelomer Sulfonamido Amine in National Foam Aqueous Film-Forming Foam to Soil. Environmental Science & Technology, 2017, 51, 12394-12404.	4.6	94
27	The mechanisms of organic carbon protection and dynamics of <scp>C</scp>â€saturation in <scp>O</scp>xisols vary with particleâ€size distribution. European Journal of Soil Science, 2017, 68, 726-739.	1.8	22
28	Can Biochar Covers Reduce Emissions from Manure Lagoons While Capturing Nutrients?. Journal of Environmental Quality, 2017, 46, 659-666.	1.0	19
29	Anaerobic microsites have an unaccounted role in soil carbon stabilization. Nature Communications, 2017, 8, 1771.	5.8	276
30	Biopolymers and Macromolecules. Encyclopedia of Earth Sciences Series, 2017, , 1-5.	0.1	2
31	Are oxygen limitations under recognized regulators of organic carbon turnover in upland soils?. Biogeochemistry, 2016, 127, 157-171.	1.7	236
32	Proteinâ€“Mineral Interactions: Molecular Dynamics Simulations Capture Importance of Variations in Mineral Surface Composition and Structure. Langmuir, 2016, 32, 6194-6209.	1.6	31
33	Abiotic Protein Fragmentation by Manganese Oxide: Implications for a Mechanism to Supply Soil Biota with Oligopeptides. Environmental Science & Technology, 2016, 50, 3486-3493.	4.6	30
34	Mineralâ€“Organic Associations: Formation, Properties, and Relevance in Soil Environments. Advances in Agronomy, 2015, 130, 1-140.	2.4	801
35	Mineral protection of soil carbon counteracted by root exudates. Nature Climate Change, 2015, 5, 588-595.	8.1	694
36	Long-term litter decomposition controlled by manganese redox cycling. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5253-60.	3.3	168

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37	The contentious nature of soil organic matter. Nature, 2015, 528, 60-68.	13.7	2,418
38	Aromaticity and degree of aromatic condensation of char. Organic Geochemistry, 2015, 78, 135-143.	0.9	207
39	How air-drying and rewetting modify soil organic matter characteristics: An assessment to improve data interpretation and inference. Soil Biology and Biochemistry, 2015, 80, 324-340.	4.2	135
40	Long residence times of rapidly decomposable soil organic matter: application of a multi-phase, multi-component, and vertically resolved model (BAMS1) to soil carbon dynamics. Geoscientific Model Development, 2014, 7, 1335-1355.	1.3	97
41	Influence of Calcium Carbonate and Charcoal Applications on Organic Matter Storage in Siltâ€Sized Aggregates Formed during a Microcosm Experiment. Soil Science Society of America Journal, 2014, 78, 1624-1631.	1.2	29
42	Redox Properties of Plant Biomass-Derived Black Carbon (Biochar). Environmental Science & Technology, 2014, 48, 5601-5611.	4.6	791
43	Water uptake in biochars: The roles of porosity and hydrophobicity. Biomass and Bioenergy, 2014, 61, 196-205.	2.9	351
44	A simple technique to eliminate ethylene emissions from biochar amendment in agriculture. Agronomy for Sustainable Development, 2013, 33, 469-474.	2.2	28
45	Advances in the Analysis of Biogeochemical Interfaces. Advances in Agronomy, 2013, , 1-46.	2.4	69
46	Synchrotron-Based Mass Spectrometry to Investigate the Molecular Properties of Mineralâ€“Organic Associations. Analytical Chemistry, 2013, 85, 6100-6106.	3.2	16
47	Extraction of fullerenes from environmental matrices as affected by solvent characteristics and analyte concentration. Journal of Separation Science, 2013, 36, 953-958.	1.3	1
48	Erosion, deposition, and the persistence of soil organic matter: mechanistic considerations and problems with terminology. Earth Surface Processes and Landforms, 2013, 38, 908-912.	1.2	138
49	A dual isotope approach to isolate soil carbon pools of different turnover times. Biogeosciences, 2013, 10, 8067-8081.	1.3	52
50	Application of ultrasound to disperse soil aggregates of high mechanical stability. Journal of Plant Nutrition and Soil Science, 2012, 175, 521-526.	1.1	35
51	Annual grassland resource pools and fluxes: sensitivity to precipitation and dry periods on two contrasting soils. Ecosphere, 2012, 3, art70-art70.	1.0	5
52	NanoSIMS Study of Organic Matter Associated with Soil Aggregates: Advantages, Limitations, and Combination with STXM. Environmental Science & Technology, 2012, 46, 3943-3949.	4.6	104
53	Transfer of litter-derived N to soil mineralâ€“organic associations: Evidence from decadal 15N tracer experiments. Organic Geochemistry, 2012, 42, 1489-1501.	0.9	64
54	Polar and aliphatic domains regulate sorption of phthalic acid esters (PAEs) to biochars. Bioresource Technology, 2012, 118, 120-127.	4.8	163

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55	Nano-scale investigation of the association of microbial nitrogen residues with iron (hydr)oxides in a forest soil O-horizon. Geochimica Et Cosmochimica Acta, 2012, 95, 213-226.	1.6	107
56	Persistence of soil organic matter in eroding versus depositional landform positions. Journal of Geophysical Research, 2012, 117, .	3.3	138
57	Solvent-Extractable Polycyclic Aromatic Hydrocarbons in Biochar: Influence of Pyrolysis Temperature and Feedstock. Environmental Science & Technology, 2012, 46, 9333-9341.	4.6	238
58	Density fractions versus size separates: does physical fractionation isolate functional soil compartments?. Biogeosciences, 2012, 9, 5181-5197.	1.3	62
59	Persistence of soil organic matter as an ecosystem property. Nature, 2011, 478, 49-56.	13.7	4,243
60	Old and stable soil organic matter is not necessarily chemically recalcitrant: implications for modeling concepts and temperature sensitivity. Global Change Biology, 2011, 17, 1097-1107.	4.2	318
61	Sorption of fluorinated herbicides to plant biomass-derived biochars as a function of molecular structure. Bioresource Technology, 2011, 102, 9897-9903.	4.8	148
62	Response to the Opinion paper by Margit von LÃ¼tzow and Ingrid KÃ¶gel-Knabner on 'What is recalcitrant soil organic matter?' by Markus Kleber. Environmental Chemistry, 2010, 7, 336.	0.7	8
63	Advances in Understanding the Molecular Structure of Soil Organic Matter. Advances in Agronomy, 2010, 106, 77-142.	2.4	255
64	What is recalcitrant soil organic matter?. Environmental Chemistry, 2010, 7, 320.	0.7	314
65	Black carbon in grassland ecosystems of the world. Global Biogeochemical Cycles, 2010, 24, .	1.9	81
66	Dynamic Molecular Structure of Plant Biomass-Derived Black Carbon (Biochar). Environmental Science & Technology, 2010, 44, 1247-1253.	4.6	2,267
67	Quantitative Analysis of Fullerene Nanomaterials in Environmental Systems: A Critical Review. Environmental Science & Technology, 2009, 43, 6463-6474.	4.6	156
68	Molecular-Level Interactions in Soils and Sediments: The Role of Aromatic Ï€-Systems. Environmental Science & Technology, 2009, 43, 3421-3429.	4.6	467
69	Variation of Preferred Orientation in Oriented Clay Mounts as a Result of Sample Preparation and Composition. Clays and Clay Minerals, 2009, 57, 686-694.	0.6	33
70	Organoâ€mineral associations in temperate soils: Integrating biology, mineralogy, and organic matter chemistry. Journal of Plant Nutrition and Soil Science, 2008, 171, 61-82.	1.1	892
71	13C and 15N stabilization dynamics in soil organic matter fractions during needle and fine root decomposition. Organic Geochemistry, 2008, 39, 465-477.	0.9	144
72	Andosols and soils with andic properties in the German soil taxonomy. Journal of Plant Nutrition and Soil Science, 2007, 170, 317-328.	1.1	15

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73	Halloysite versus gibbsite: Silicon cycling as a pedogenetic process in two lowland neotropical rain forest soils of La Selva, Costa Rica. Geoderma, 2007, 138, 1-11.	2.3	98
74	A conceptual model of organo-mineral interactions in soils: self-assembly of organic molecular fragments into zonal structures on mineral surfaces. Biogeochemistry, 2007, 85, 9-24.	1.7	898
75	Stabilization of Soil Organic Matter: Association with Minerals or Chemical Recalcitrance?. Biogeochemistry, 2006, 77, 25-56.	1.7	681
76	Organic C and N stabilization in a forest soil: Evidence from sequential density fractionation. Soil Biology and Biochemistry, 2006, 38, 3313-3324.	4.2	370
77	Sodium hypochlorite oxidation reduces soil organic matter concentrations without affecting inorganic soil constituents. European Journal of Soil Science, 2005, 56, 481-490.	1.8	121
78	Poorly crystalline minerals protect organic carbon in clay subfractions from acid subsoil horizons. Geoderma, 2005, 128, 106-115.	2.3	98
79	Soil organic matter stabilization pathways in clay sub-fractions from a time series of fertilizer deprivation. Organic Geochemistry, 2005, 36, 1311-1322.	0.9	21
80	Changes in surface reactivity and organic matter composition of clay subfractions with duration of fertilizer deprivation. European Journal of Soil Science, 2004, 55, 381-391.	1.8	38
81	First estimates of regional (AllgÃu, Germany) and global CH4 fluxes from wet colluvial margins of closed depressions in glacial drift areas. Agriculture, Ecosystems and Environment, 2004, 103, 251-257.	2.5	18
82	Andosols in Germanyâ€"pedogenesis and properties. Catena, 2004, 56, 67-83.	2.2	39
83	Retention of dissolved organic matter by phyllosilicate and soil clay fractions in relation to mineral properties. Organic Geochemistry, 2004, 35, 269-276.	0.9	103
84	Stabilisation of soil organic matter by interactions with minerals as revealed by mineral dissolution and oxidative degradation. Organic Geochemistry, 2003, 34, 1591-1600.	0.9	362
85	Retention of dissolved organic matter by illitic soils and clay fractions: Influence of mineral phase properties. Journal of Plant Nutrition and Soil Science, 2003, 166, 737-741.	1.1	37
86	Construction and Evaluation of Redox Electrode with Summing Operational Amplifier: Application in Study of Methane Emission. Communications in Soil Science and Plant Analysis, 2003, 34, 481-496.	0.6	12
87	Title is missing!. Soil Science, 2003, 168, 292-306.	0.9	4
88	PREHISTORIC ALTERATION OF SOIL PROPERTIES IN A CENTRAL GERMAN CHERNOZEMIC SOIL. Soil Science, 2003, 168, 292-306.	0.9	42
89	An Andosol from Eastern Saxony, Germany. Journal of Plant Nutrition and Soil Science, 2003, 166, 533-542.	1.1	15
90	Preparing a soil carbon inventory of Saxony-Anhalt, Central Germany using GIS and the state soil data base SABO_P. Journal of Plant Nutrition and Soil Science, 2003, 166, 642-648.	1.1	9

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91	Carbon Storage in Coarse and Fine Clay Fractions of Illitic Soils. Soil Science Society of America Journal, 2003, 67, 1732-1739.	1.2	51
92	Carbon storage in loess derived surface soils from Central Germany: Influence of mineral phase variables. Journal of Plant Nutrition and Soil Science, 2002, 165, 141.	1.1	71
93	Das mineralinventar der versuchsflaÂ¨che "statischer dauerduÂ¨ngungsversuch v120, bad lauchstaÂ¨dt". Archives of Agronomy and Soil Science, 2002, 48, 227-240.	1.3	7
94	Review of XRD-based quantitative analyses of clay minerals in soils: the suitability of mineral intensity factors. Geoderma, 2002, 109, 191-205.	2.3	175
95	Predicting carbon content in illitic clay fractions from surface area, cation exchange capacity and dithionite-extractable iron. European Journal of Soil Science, 2002, 53, 639-644.	1.8	56
96	Linking soil classification and soil dynamics â€" pedological and ecological perspectives. Journal of Plant Nutrition and Soil Science, 2002, 165, 517.	1.1	35
97	Formation of mineral N (NH4+, NO3â€") during mineralization of organic matter from coal refuse material and municipal sludge. Journal of Plant Nutrition and Soil Science, 2000, 163, 73-80.	1.1	10
98	Ion exchange resinâ€"soil mixtures as a tool in net nitrogen mineralisation studies. Soil Biology and Biochemistry, 2000, 32, 1529-1536.	4.2	24
99	Stickstoffumsatz in einer LÃ¶ÃŸcatena. Journal of Plant Nutrition and Soil Science, 1999, 162, 329-336.	1.1	1
100	Microbial biomass Câ€•and Nâ€dynamics in grassland soils amended with liquid manure. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1998, 161, 87-92.	0.4	8