Ingrid KÃ¶gel-Knabner

List of Publications by Year
in descending order

333 papers	37,040 citations	4146 87 h-index	3650 180 g-index
368 all docs	368 docs citations	368 times ranked	20412 citing authors

#	Article	IF	Citations
1	Persistence of soil organic matter as an ecosystem property. Nature, 2011, 478, 49-56.	27.8	4,243
2	Stabilization of organic matter in temperate soils: mechanisms and their relevance under different soil conditions - a review. European Journal of Soil Science, 2006, 57, 426-445.	3.9	2,144
3	The macromolecular organic composition of plant and microbial residues as inputs to soil organic matter. Soil Biology and Biochemistry, 2002, 34, 139-162.	8.8	1,488
4	Deep soil organic matterâ€"a key but poorly understood component of terrestrial C cycle. Plant and Soil, 2011, 338, 143-158.	3.7	1,239
5	SOM fractionation methods: Relevance to functional pools and to stabilization mechanisms. Soil Biology and Biochemistry, 2007, 39, 2183-2207.	8.8	1,130
6	Soil organic carbon storage as a key function of soils - A review of drivers and indicators at various scales. Geoderma, 2019, 333, 149-162.	5.1	944
7	Biogeochemistry of paddy soils. Geoderma, 2010, 157, 1-14.	5.1	912
8	Organoâ€mineral associations in temperate soils: Integrating biology, mineralogy, and organic matter chemistry. Journal of Plant Nutrition and Soil Science, 2008, 171, 61-82.	1.9	892
9	The molecularly-uncharacterized component of nonliving organic matter in natural environments. Organic Geochemistry, 2000, 31, 945-958.	1.8	618
10	Microaggregates in soils. Journal of Plant Nutrition and Soil Science, 2018, 181, 104-136.	1.9	567
11	The concept and future prospects of soil health. Nature Reviews Earth & Environment, 2020, 1, 544-553.	29.7	486
12	Temperature sensitivity of soil organic matter decompositionâ€"what do we know?. Biology and Fertility of Soils, 2009, 46, 1-15.	4.3	404
13	13C and 15N NMR spectroscopy as a tool in soil organic matter studies. Geoderma, 1997, 80, 243-270.	5.1	403
14	Grazing effects on soil chemical and physical properties in a semiarid steppe of Inner Mongolia (P.R.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	5.1	372
15	Stabilization mechanisms of organic matter in four temperate soils: Development and application of a conceptual model. Journal of Plant Nutrition and Soil Science, 2008, 171, 111-124.	1.9	367
16	Persistence of soil organic carbon caused by functional complexity. Nature Geoscience, 2020, 13, 529-534.	12.9	363
17	Stabilisation of soil organic matter by interactions with minerals as revealed by mineral dissolution and oxidative degradation. Organic Geochemistry, 2003, 34, 1591-1600.	1.8	362
18	Analytical approaches for characterizing soil organic matter. Organic Geochemistry, 2000, 31, 609-625.	1.8	336

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19	Digital mapping of soil organic matter stocks using Random Forest modeling in a semi-arid steppe ecosystem. Plant and Soil, 2011, 340, 7-24.	3.7	335
20	Improvement of 13 C and 15 N CPMAS NMR spectra of bulk soils, particle size fractions and organic material by treatment with 10% hydrofluoric acid. European Journal of Soil Science, 1997, 48, 319-328.	3.9	333
21	Contribution of lignin and polysaccharides to the refractory carbon pool in C-depleted arable soils. Soil Biology and Biochemistry, 2003, 35, 101-118.	8.8	327
22	Vertical distribution, age, and chemical composition of organic carbon in two forest soils of different pedogenesis. Organic Geochemistry, 2002, 33, 1131-1142.	1.8	316
23	Soil organic matter fractions as early indicators for carbon stock changes under different land-use?. Geoderma, 2005, 124, 143-155.	5.1	304
24	Charred organic carbon in German chernozemic soils. European Journal of Soil Science, 1999, 50, 351-365.	3.9	293
25	Submicron structures provide preferential spots for carbon and nitrogen sequestration in soils. Nature Communications, 2014, 5, 2947.	12.8	288
26	Characterization of Ferrihydrite-Soil Organic Matter Coprecipitates by X-ray Diffraction and MÃ¶ssbauer Spectroscopy. Environmental Science & Technology, 2008, 42, 7891-7897.	10.0	268
27	Storage and stability of organic carbon in soils as related to depth, occlusion within aggregates, and attachment to minerals. Biogeosciences, 2013, 10, 1675-1691.	3.3	252
28	Soil organic carbon stocks in southeast Germany (Bavaria) as affected by land use, soil type and sampling depth. Global Change Biology, 2012, 18, 2233-2245.	9.5	242
29	Estimation and decomposition pattern of the lignin component in forest humus layers. Soil Biology and Biochemistry, 1986, 18, 589-594.	8.8	234
30	Stabilization of organic matter by soil minerals â€" investigations of density and particle-size fractions from two acid forest soils. Journal of Plant Nutrition and Soil Science, 2002, 165, 451.	1.9	220
31	Fractionation of Organic Matter Due to Reaction with Ferrihydrite: Coprecipitation versus Adsorption. Environmental Science & Technology, 2011, 45, 527-533.	10.0	217
32	Stabilised carbon in subsoil horizons is located in spatially distinct parts of the soil profile. Soil Biology and Biochemistry, 2009, 41, 256-261.	8.8	215
33	Soil C and N stocks as affected by cropping systems and nitrogen fertilisation in a southern Brazil Acrisol managed under no-tillage for 17 years. Soil and Tillage Research, 2005, 81, 87-95.	5.6	214
34	Soil organic carbon stocks in topsoil and subsoil controlled by parent material, carbon input in the rhizosphere, and microbial-derived compounds. Soil Biology and Biochemistry, 2018, 122, 19-30.	8.8	202
35	Evaluation of an ultrasonic dispersion procedure to isolate primary organomineral complexes from soils. European Journal of Soil Science, 1999, 50, 87-94.	3.9	199
36	The role of microorganisms at different stages of ecosystem development for soil formation. Biogeosciences, 2013, 10, 3983-3996.	3.3	189

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37	The effect of 10% HF treatment on the resolution of CPMAS 13C NMR spectra and on the quality of organic matter in Ferralsols. Geoderma, 2003, 116, 373-392.	5.1	177
38	The macromolecular organic composition of plant and microbial residues as inputs to soil organic matter: Fourteen years on. Soil Biology and Biochemistry, 2017, 105, A3-A8.	8.8	175
39	Carbon and nitrogen stocks in physical fractions of a subtropical Acrisol as influenced by long-term no-till cropping systems and N fertilisation. Plant and Soil, 2005, 268, 319-328.	3.7	172
40	Location and chemical composition of stabilized organic carbon in topsoil and subsoil horizons of two acid forest soils. Soil Biology and Biochemistry, 2004, 36, 177-190.	8.8	171
41	Content and composition of free and occluded particulate organic matter in a differently textured arable Cambisol as revealed by solid-state13C NMR spectroscopy. Journal of Plant Nutrition and Soil Science, 2004, 167, 45-53.	1.9	170
42	Carbon sequestration potential of soils in southeast Germany derived from stable soil organic carbon saturation. Global Change Biology, 2014, 20, 653-665.	9.5	170
43	Tree girdling provides insight on the role of labile carbon in nitrogen partitioning between soil microorganisms and adult European beech. Soil Biology and Biochemistry, 2009, 41, 1622-1631.	8.8	167
44	Stabilization of soil organic matter isolated via oxidative degradation. Organic Geochemistry, 2005, 36, 1567-1575.	1.8	162
45	Chemical composition of the organic matter in forest soils: The humus layer. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1988, 151, 331-340.	0.4	148
46	Soil organic matter stabilization in acidic forest soils is preferential and soil typeâ€specific. European Journal of Soil Science, 2008, 59, 674-692.	3.9	145
47	Biogeochemical interfaces in soil: The interdisciplinary challenge for soil science. Journal of Plant Nutrition and Soil Science, 2010, 173, 88-99.	1.9	143
48	Amount, distribution and driving factors of soil organic carbon and nitrogen in cropland and grassland soils of southeast Germany (Bavaria). Agriculture, Ecosystems and Environment, 2013, 176, 39-52.	5.3	143
49	Alteration of soil organic matter following treatment with hydrofluoric acid (HF). Organic Geochemistry, 2006, 37, 1437-1451.	1.8	139
50	Characterization of lignin in forest humus layers by high-performance liquid chromatography of cupric oxide oxidation products. Soil Biology and Biochemistry, 1985, 17, 637-640.	8.8	138
51	An integrative approach of organic matter stabilization in temperate soils: Linking chemistry, physics, and biology. Journal of Plant Nutrition and Soil Science, 2008, 171, 5-13.	1.9	129
52	Aggregation controls the stability of lignin and lipids in clay-sized particulate and mineral associated organic matter. Biogeochemistry, 2017, 132, 307-324.	3.5	129
53	Root Exudates Induce Soil Macroaggregation Facilitated by Fungi in Subsoil. Frontiers in Environmental Science, 2018, 6, .	3.3	128
54	Girdling Affects Ectomycorrhizal Fungal (EMF) Diversity and Reveals Functional Differences in EMF Community Composition in a Beech Forest. Applied and Environmental Microbiology, 2010, 76, 1831-1841.	3.1	126

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55	Organo-mineral associations in sandy acid forest soils: importance of specific surface area, iron oxides and micropores. European Journal of Soil Science, 2005, 56, 050912034650049.	3.9	125
56	Aliphatic components of forest soil organic matter as determined by solid-state 13C NMR and analytical pyrolysis. Science of the Total Environment, 1992, 113, 89-106.	8.0	124
57	Occurrence, distribution and fate of the lipid plant biopolymers cutin and suberin in temperate forest soils. Organic Geochemistry, 1993, 20, 1063-1076.	1.8	120
58	Ancient paddy soils from the Neolithic age in Chinaâ€™s Yangtze River Delta. Die Naturwissenschaften, 2006, 93, 232-236.	1.6	120
59	Chemical Structural Studies of Forest Soil Humic Acids: Aromatic Carbon Fraction. Soil Science Society of America Journal, 1991, 55, 241-247.	2.2	118
60	Refractory organic carbon in particle-size fractions of arable soils II: organic carbon in relation to mineral surface area and iron oxides in fractions <6 Î¼m. Organic Geochemistry, 2002, 33, 1699-1713.	1.8	116
61	Nature and distribution of alkyl carbon in forest soil profiles: implications for the origin and humification of aliphatic biomacromolecules. Science of the Total Environment, 1992, 117-118, 175-185.	8.0	114
62	A systemic approach for modeling soil functions. Soil, 2018, 4, 83-92.	4.9	113
63	Dissolved Organic Matterâ€Enhanced Retention of Polycyclic Aromatic Hydrocarbons in Soil Miscible Displacement Experiments. Journal of Environmental Quality, 1997, 26, 1090-1100.	2.0	112
64	Anthropogenic N deposition increases soil organic matterÂaccumulation without altering its biochemical composition. Global Change Biology, 2017, 23, 933-944.	9.5	111
65	Small scale spatial variability of organic carbon stocks in litter and solum of a forested Luvisol. Geoderma, 2006, 136, 631-642.	5.1	110
66	How are soil use and management reflected by soil organic matter characteristics: a spectroscopic approach. European Journal of Soil Science, 2006, 57, 485-494.	3.9	108
67	Aggregate stability and physical protection of soil organic carbon in semiâ€arid steppe soils. European Journal of Soil Science, 2012, 63, 22-31.	3.9	107
68	Storage and drivers of organic carbon in forest soils of southeast Germany (Bavaria) â€“ Implications for carbon sequestration. Forest Ecology and Management, 2013, 295, 162-172.	3.2	107
69	Projected loss of soil organic carbon in temperate agricultural soils in the 21st century: effects of climate change and carbon input trends. Scientific Reports, 2016, 6, 32525.	3.3	107
70	Partitioning of polycyclic aromatic hydrocarbons (PAH) to water-soluble soil organic matter. European Journal of Soil Science, 1995, 46, 193-204.	3.9	106
71	MALDI-TOF mass spectrometry and PSD fragmentation as means for the analysis of condensed tannins in plant leaves and needles. Phytochemistry, 2003, 62, 1159-1170.	2.9	106
72	Sorption of polycyclic aromatic hydrocarbons to mineral surfaces. European Journal of Soil Science, 2007, 58, 918-931.	3.9	106

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73	N balance and cycling of Inner Mongolia typical steppe: a comprehensive case study of grazing effects. Ecological Monographs, 2013, 83, 195-219.	5.4	105
74	Chemical heterogeneity of humic substances: characterization of size fractions obtained by hollowâ€fibre ultrafiltration. European Journal of Soil Science, 2000, 51, 617-625.	3.9	104
75	Partitioning of polycyclic aromatic hydrocarbons to dissolved organic matter from different soils. Chemosphere, 1998, 36, 79-97.	8.2	102
76	Chemical composition of young and old carbon pools throughout Cambisol and Luvisol profiles under forests. Soil Biology and Biochemistry, 2006, 38, 2411-2424.	8.8	102
77	Concurrent evolution of organic and mineral components during initial soil development after retreat of the Damma glacier, Switzerland. Geoderma, 2011, 163, 83-94.	5.1	102
78	Humic substances distribution and transformation in forest soils. Science of the Total Environment, 1992, 117-118, 155-174.	8.0	99
79	Soil Type-Dependent Responses to Phenanthrene as Revealed by Determining the Diversity and Abundance of Polycyclic Aromatic Hydrocarbon Ring-Hydroxylating Dioxygenase Genes by Using a Novel PCR Detection System. Applied and Environmental Microbiology, 2010, 76, 4765-4771.	3.1	98
80	Indications for soil organic matter quality in soils under different management. Geoderma, 2002, 105, 243-258.	5.1	97
81	Types and chemical composition of organic matter in reforested lignite-rich mine soils. Geoderma, 1998, 86, 123-142.	5.1	95
82	STXM and NanoSIMS Investigations on EPS Fractions before and after Adsorption to Goethite. Environmental Science & Technology, 2013, 47, 3158-3166.	10.0	95
83	Carbon storage capacity of semiâ€arid grassland soils and sequestration potentials in northern China. Global Change Biology, 2015, 21, 3836-3845.	9.5	95
84	Alteration of soil organic matter pools and aggregation in semiâ€arid steppe topsoils as driven by organic matter input. European Journal of Soil Science, 2009, 60, 198-212.	3.9	93
85	Submicron scale imaging of soil organic matter dynamics using NanoSIMS â€“ From single particles to intact aggregates. Organic Geochemistry, 2012, 42, 1476-1488.	1.8	93
86	Development of biogeochemical interfaces in an artificial soil incubation experiment; aggregation and formation of organo-mineral associations. Geoderma, 2012, 189-190, 585-594.	5.1	92
87	Speciation of sulphur in soils and soil particles by X-ray spectromicroscopy. European Journal of Soil Science, 2003, 54, 423-433.	3.9	91
88	Organic carbon accumulation in a 2000-year chronosequence of paddy soil evolution. Catena, 2011, 87, 376-385.	5.0	91
89	Decoupled carbon and nitrogen mineralization in soil particle size fractions of a forest topsoil. Soil Biology and Biochemistry, 2014, 78, 263-273.	8.8	91
90	Refractory organic carbon in C-depleted arable soils, as studied by 13C NMR spectroscopy and carbohydrate analysis. Organic Geochemistry, 2000, 31, 655-668.	1.8	89

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91	Characteristics of soil organic matter of different Brazilian Ferralsols under native vegetation as a function of soil depth. Geoderma, 2005, 124, 319-333.	5.1	89
92	Non-cellulosic neutral sugar contribution to mineral associated organic matter in top- and subsoil horizons of two acid forest soils. Soil Biology and Biochemistry, 2010, 42, 379-382.	8.8	89
93	Soil organic matter in major pedogenic soil groups. Geoderma, 2021, 384, 114785.	5.1	89
94	Soil organic carbon stocks, distribution, and composition affected by historic land use changes on adjacent sites. Biology and Fertility of Soils, 2009, 45, 347-359.	4.3	86
95	Soil microaggregate size composition and organic matter distribution as affected by clay content. Geoderma, 2019, 355, 113901.	5.1	86
96	Accumulation of nitrogen and microbial residues during 2000Âyears of rice paddy and non-paddy soil development in the Yangtze River Delta, China. Global Change Biology, 2011, 17, 3405-3417.	9.5	85
97	The carbon count of 2000Âyears of rice cultivation. Global Change Biology, 2013, 19, 1107-1113.	9.5	85
98	Effect of in-situ aged and fresh biochar on soil hydraulic conditions and microbial C use under drought conditions. Scientific Reports, 2018, 8, 6852.	3.3	84
99	Large soil organic carbon increase due to improved agronomic management in the North China Plain from 1980s to 2010s. Global Change Biology, 2018, 24, 987-1000.	9.5	84
100	Clay mineral composition modifies decomposition and sequestration of organic carbon and nitrogen in fine soil fractions. Biology and Fertility of Soils, 2015, 51, 427-442.	4.3	82
101	Carbon and nitrogen mineralization in hierarchically structured aggregates of different size. Soil and Tillage Research, 2016, 160, 23-33.	5.6	80
102	Organic carbon and nitrogen in fine soil fractions after treatment with hydrogen peroxide. Soil Biology and Biochemistry, 2001, 33, 2155-2158.	8.8	79
103	Land use effects on organic carbon storage in soils of Bavaria: The importance of soil types. Soil and Tillage Research, 2015, 146, 296-302.	5.6	79
104	Spatial distribution and chemical composition of soil organic matter fractions in rhizosphere and non-rhizosphere soil under European beech (Fagus sylvatica L.). Geoderma, 2016, 264, 179-187.	5.1	79
105	Degradation and small-scale spatial homogenization of topsoils in intensively-grazed steppes of Northern China. Soil and Tillage Research, 2009, 104, 299-310.	5.6	78
106	Changes in the chemical composition of soil organic matter after application of compost. European Journal of Soil Science, 2002, 53, 299-309.	3.9	77
107	Management-induced organic carbon accumulation in paddy soils: The role of organo-mineral associations. Soil and Tillage Research, 2013, 126, 60-71.	5.6	77
108	Mineral composition and charcoal determine the bacterial community structure in artificial soils. FEMS Microbiology Ecology, 2013, 86, 15-25.	2.7	76

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109	Artificial soil studies reveal domain-specific preferences of microorganisms for the colonisation of different soil minerals and particle size fractions. FEMS Microbiology Ecology, 2014, 90, 770-782.	2.7	76
110	Accelerated soil formation due to paddy management on marshlands (Zhejiang Province, China). Geoderma, 2014, 228-229, 67-89.	5.1	76
111	Organic matter input determines structure development and aggregate formation in artificial soils. Geoderma, 2019, 354, 113881.	5.1	76
112	Advances in Molecular Approaches for Understanding Soil Organic Matter Composition, Origin, and Turnover: A Historical Overview. Advances in Agronomy, 2018, , 1-48.	5.2	75
113	Clay fractions from a soil chronosequence after glacier retreat reveal the initial evolution of organoâ€“mineral associations. Geochimica Et Cosmochimica Acta, 2012, 85, 1-18.	3.9	74
114	Comparison of humus horizons from two ecosystem phases on northern Vancouver Island using 13C CPMAS NMR spectroscopy and CuO oxidation. Canadian Journal of Soil Science, 1993, 73, 9-25.	1.2	73
115	Intimate association between O/N-alkyl carbon and iron oxides in clay fractions of forest soils. Organic Geochemistry, 2005, 36, 1378-1390.	1.8	73
116	Impact of brown coal dust on the organic matter in particle-size fractions of a Mollisol. Organic Geochemistry, 1996, 25, 29-39.	1.8	72
117	Tracing the sources and spatial distribution of organic carbon in subsoils using a multi-biomarker approach. Scientific Reports, 2016, 6, 29478.	3.3	72
118	Iron Oxides as Major Available Interface Component in Loamy Arable Topsoils. Soil Science Society of America Journal, 2011, 75, 2158-2168.	2.2	71
119	Organic matter from biological soil crusts induces the initial formation of sandy temperate soils. Catena, 2014, 122, 196-208.	5.0	71
120	Changes in the structure and protein binding ability of condensed tannins during decomposition of fresh needles and leaves. Soil Biology and Biochemistry, 2003, 35, 577-589.	8.8	68
121	Composition and radiocarbon age of HF-resistant soil organic matter in a Podzol and a Cambisol. Organic Geochemistry, 2007, 38, 1356-1372.	1.8	68
122	Alteration of gymnosperm and angiosperm lignin during decomposition in forest humus layers. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1986, 149, 323-331.	0.4	67
123	Estimation of total organic carbon storage and its driving factors in soils of Bavaria (southeast) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.1	67
124	The role of allophane nano-structure and Fe oxide speciation for hosting soil organic matter in an allophanic Andosol. Geochimica Et Cosmochimica Acta, 2016, 180, 284-302.	3.9	67
125	Interaction of minerals, organic matter, and microorganisms during biogeochemical interface formation as shown by a series of artificial soil experiments. Biology and Fertility of Soils, 2017, 53, 9-22.	4.3	67
126	Organic matter accumulating in Aeh and Bh horizons of a PodzolÂâ€" chemical characterization in primary organo-mineral associations. Organic Geochemistry, 2000, 31, 727-734.	1.8	66

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127	Quantification of functional soil organic carbon pools for major soil units and land uses in southeast Germany (Bavaria). Agriculture, Ecosystems and Environment, 2014, 185, 208-220.	5.3	65
128	Establishment of macro-aggregates and organic matter turnover by microbial communities in long-term incubated artificial soils. Soil Biology and Biochemistry, 2014, 79, 57-67.	8.8	65
129	Changes in the lignin fraction of spruce and pine needle litter during decomposition as studied by some chemical methods. Soil Biology and Biochemistry, 1986, 18, 611-619.	8.8	63
130	Biological activity and organic matter mineralization of soils amended with biowaste composts. Journal of Plant Nutrition and Soil Science, 2002, 165, 151.	1.9	63
131	Soil organic matter composition and soil lightness. Journal of Plant Nutrition and Soil Science, 2004, 167, 545-555.	1.9	63
132	The modeling of reactive solute transport with sorption to mobile and immobile sorbents: 1. Experimental evidence and model development. Water Resources Research, 1996, 32, 1611-1622.	4.2	61
133	Patterns and processes of initial terrestrialâ€ecosystem development. Journal of Plant Nutrition and Soil Science, 2011, 174, 229-239.	1.9	61
134	Organic carbon accumulation on soil mineral surfaces in paddy soils derived from tidal wetlands. Geoderma, 2014, 228-229, 90-103.	5.1	60
135	Nature of organic nitrogen in fine particle size separates of sandy soils of highly industrialized areas as revealed by NMR spectroscopy. Soil Biology and Biochemistry, 2000, 32, 241-252.	8.8	59
136	Quantification of carbon derived from lignite in soils using mid-infrared spectroscopy and partial least squares. Organic Geochemistry, 2001, 32, 831-839.	1.8	59
137	O/N-alkyl and alkyl C are stabilised in fine particle size fractions of forest soils. Biogeochemistry, 2005, 73, 475-497.	3.5	59
138	Title is missing!. Plant and Soil, 1999, 213, 161-168.	3.7	58
139	Changes of lignin phenols and neutral sugars in different soil types of a high-elevation forest ecosystem 25 years after forest dieback. Soil Biology and Biochemistry, 2007, 39, 655-668.	8.8	58
140	Is turnover and development of organic matter controlled by mineral composition?. Soil Biology and Biochemistry, 2013, 67, 235-244.	8.8	58
141	The fate of cutin and suberin of decaying leaves, needles and roots â€“ Inferences from the initial decomposition of bound fatty acids. Organic Geochemistry, 2016, 95, 81-92.	1.8	58
142	Identification of Distinct Functional Microstructural Domains Controlling C Storage in Soil. Environmental Science & Technology, 2017, 51, 12182-12189.	10.0	58
143	Distribution of soil organic matter between fractions and aggregate size classes in grazed semiarid steppe soil profiles. Plant and Soil, 2011, 338, 63-81.	3.7	57
144	Grazing changes topography-controlled topsoil properties and their interaction on different spatial scales in a semi-arid grassland of Inner Mongolia, P.R. China. Plant and Soil, 2011, 340, 35-58.	3.7	55

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145	Distribution of cutin and suberin biomarkers under forest trees with different root systems. Plant and Soil, 2014, 381, 95-110.	3.7	55
146	Distribution and decomposition pattern of cutin and suberin in forest soils. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1989, 152, 409-413.	0.4	54
147	Refractory organic carbon in particle-size fractions of arable soils I: distribution of refractory carbon between the size fractions. Organic Geochemistry, 2002, 33, 1683-1697.	1.8	54
148	Rhizosphere Spatiotemporal Organizationâ€“A Key to Rhizosphere Functions. Frontiers in Agronomy, 2020, 2, .	3.3	54
149	Influence of origin and properties of dissolved organic matter on the partition of polycyclic aromatic hydrocarbons (PAHs). European Journal of Soil Science, 1997, 48, 443-455.	3.9	54
150	Araucaria forest expansion on grassland in the southern Brazilian highlands as revealed by 14C and Î´13C studies. Geoderma, 2008, 145, 143-157.	5.1	53
151	NanoSIMS as a tool for characterizing soil model compounds and organomineral associations in artificial soils. Journal of Soils and Sediments, 2012, 12, 35-47.	3.0	53
152	Stagnating crop yields: An overlooked risk for the carbon balance of agricultural soils?. Science of the Total Environment, 2015, 536, 1045-1051.	8.0	53
153	Ensuring planetary survival: the centrality of organic carbon in balancing the multifunctional nature of soils. Critical Reviews in Environmental Science and Technology, 2022, 52, 4308-4324.	12.8	52
154	Fate of anthracene in contaminated soil: transport and biochemical transformation under unsaturated flow conditions. European Journal of Soil Science, 2002, 53, 71-81.	3.9	51
155	Organic matter in particle-size fractions from A and B horizons of a Haplic Alisol. European Journal of Soil Science, 2002, 53, 383-391.	3.9	51
156	Hotspots of soil organic carbon storage revealed by laboratory hyperspectral imaging. Scientific Reports, 2018, 8, 13900.	3.3	51
157	Feasibility of the 4 per 1000 initiative in Bavaria: A reality check of agricultural soil management and carbon sequestration scenarios. Geoderma, 2020, 369, 114333.	5.1	51
158	Soil Organic Matter Changes in a Spruce Ecosystem 25 Years after Disturbance. Soil Science Society of America Journal, 2006, 70, 2130-2145.	2.2	50
159	Grazing effects on the greenhouse gas balance of a temperate steppe ecosystem. Nutrient Cycling in Agroecosystems, 2012, 93, 357-371.	2.2	50
160	Labile organic C and N mineralization of soil aggregate size classes in semiarid grasslands as affected by grazing management. Biology and Fertility of Soils, 2012, 48, 305-313.	4.3	50
161	The role of clay content and mineral surface area for soil organic carbon storage in an arable toposequence. Biogeochemistry, 2021, 156, 401-420.	3.5	50
162	Soil organic carbon sequestration in temperate agroforestry systems â€“ A meta-analysis. Agriculture, Ecosystems and Environment, 2022, 323, 107689.	5.3	50

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163	Quantification of lignite- and vegetation-derived soil carbon using 14C activity measurements in a forested chronosequence. Geoderma, 2003, 112, 155-166.	5.1	48
164	Rapid soil formation after glacial retreat shaped by spatial patterns of organic matter accrual in microaggregates. Global Change Biology, 2018, 24, 1637-1650.	9.5	48
165	Desorption of Polycyclic Aromatic Hydrocarbons from Soil in the Presence of Dissolved Organic Matter: Effect of Solution Composition and Aging. Journal of Environmental Quality, 2000, 29, 906-916.	2.0	46
166	Effect of N content and soil texture on the decomposition of organic matter in forest soils as revealed by solid-state CPMAS NMR spectroscopy. Organic Geochemistry, 2002, 33, 1715-1726.	1.8	46
167	Subsoil organo-mineral associations under contrasting climate conditions. Geochimica Et Cosmochimica Acta, 2020, 270, 244-263.	3.9	46
168	A rapid and efficient determination of natural estrogens in soils by pressurised liquid extraction and gas chromatographyâ€“mass spectrometry. Chemosphere, 2008, 71, 954-960.	8.2	45
169	A lignin-like polymer in the cuticle of spruce needles: implications for the humification of spruce litter. Organic Geochemistry, 1994, 21, 1219-1228.	1.8	44
170	Organic matter characteristics and distribution in Ferralsol profiles of a climosequence in southern Brazil. European Journal of Soil Science, 2006, 57, 644-654.	3.9	44
171	Particle size fractionation of soil containing coal and combusted particles. European Journal of Soil Science, 1999, 50, 515-522.	3.9	43
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