Michael W I Schmidt

List of Publications by Year
in descending order

103	14,376	44069 48	30922 102
papers	citations	h-index	g-index

132	132	132	12475
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Warming and elevated CO₂ promote rapid incorporation and degradation of plantâ€derived organic matter in an ombrotrophic peatland. Global Change Biology, 2022, 28, 883-898.	9.5	15
2	Ecosystem organic carbon storage and their drivers across the drylands of China. Catena, 2022, 214, 106280.	5.0	13
3	Warming promotes loss of subsoil carbon through accelerated degradation of plant-derived organic matter. Soil Biology and Biochemistry, 2021, 156, 108185.	8.8	35
4	Five years of whole-soil warming led to loss of subsoil carbon stocks and increased CO ₂ efflux. Science Advances, 2021, 7, .	10.3	98
5	Whole-soil warming decreases abundance and modifies the community structure of microorganisms in the subsoil but not in surface soil. Soil, 2021, 7, 477-494.	4.9	5
6	A Critical Evaluation of the Relationship Between the Effective Cation Exchange Capacity and Soil Organic Carbon Content in Swiss Forest Soils. Frontiers in Forests and Global Change, 2020, 3, .	2.3	71
7	Marked isotopic variability within and between the Amazon River and marine dissolved black carbon pools. Nature Communications, 2019, 10, 4018.	12.8	47
8	Tropical forest soil carbon stocks do not increase despite 15 years of doubled litter inputs. Scientific Reports, 2019, 9, 18030.	3.3	43
9	The changing faces of soil organic matter research. European Journal of Soil Science, 2018, 69, 23-30.	3.9	35
10	Global-scale evidence for the refractory nature of riverine black carbon. Nature Geoscience, 2018, 11, 584-588.	12.9	111
11	What on Earth Have We Been Burning? Deciphering Sedimentary Records of Pyrogenic Carbon. Environmental Science & Technology, 2017, 51, 12972-12980.	10.0	23
12	Comprehensive radiocarbon analysis of benzene polycarboxylic acids (BPCAs) derived from pyrogenic carbon in environmental samples. Radiocarbon, 2017, 59, 1103-1116.	1.8	37
13	The MICE facility â€“ a new tool to study plantâ€“soil C cycling with a holistic approach. Isotopes in Environmental and Health Studies, 2017, 53, 286-297.	1.0	6
14	Pyrogenic Carbon in Soils: A Literature-Based Inventory and a Global Estimation of Its Content in Soil Organic Carbon and Stocks. Frontiers in Earth Science, 2016, 4, .	1.8	152
15	Quantification of pyrogenic carbon in the environment: An integration of analytical approaches. Organic Geochemistry, 2016, 100, 42-50.	1.8	28
16	Characterization, Quantification and Compound-specific Isotopic Analysis of Pyrogenic Carbon Using Benzene Polycarboxylic Acids (BPCA). Journal of Visualized Experiments, 2016, , .	0.3	21
17	Decoupled sedimentary records of combustion: Causes and implications. Geophysical Research Letters, 2016, 43, 5098-5108.	4.0	11
18	A call for international soil experiment networks for studying, predicting, and managing global change impacts. Soil, 2015, 1, 575-582.	4.9	12

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19	Aromaticity and degree of aromatic condensation of char. Organic Geochemistry, 2015, 78, 135-143.	1.8	207
20	Interactive effects of elevated <scp>CO</scp>₂ and nitrogen deposition on fatty acid molecular and isotope composition of aboveâ€•and belowground tree biomass and forest soil fractions. Global Change Biology, 2015, 21, 473-486.	9.5	28
21	Carbon losses from pyrolysed and original wood in a forest soil under natural and increased N deposition. Biogeosciences, 2014, 11, 5199-5213.	3.3	38
22	Transformation and stabilization of pyrogenic organic matter in a temperate forest field experiment. Global Change Biology, 2014, 20, 1629-1642.	9.5	82
23	Nitrogen deposition promotes the production of new fungal residues but retards the decomposition of old residues in forest soil fractions. Global Change Biology, 2014, 20, 327-340.	9.5	72
24	Biochar by design. Nature Geoscience, 2014, 7, 326-327.	12.9	76
25	Purification of fire derived markers for Î¼g scale isotope analysis (Î´13C, Î”14C) using high performance liquid chromatography (HPLC). Organic Geochemistry, 2014, 70, 1-9.	1.8	13
26	Ryegrass-derived pyrogenic organic matter changes organic carbon and nitrogen mineralization in a temperate forest soil. Soil Biology and Biochemistry, 2014, 69, 291-301.	8.8	100
27	Effect of permafrost on the formation of soil organic carbon pools and their physicalâ€“chemical properties in the Eastern Swiss Alps. Catena, 2013, 110, 70-85.	5.0	34
28	Toward a â€œMolecular Thermometerâ€•to Estimate the Charring Temperature of Wildland Charcoals Derived from Different Biomass Sources. Environmental Science & Technology, 2013, 47, 11490-11495.	10.0	34
29	Discrepancies in utilization of density fractionation along with ultrasonic dispersion to obtain distinct pools of soil organic matter. Journal of Plant Nutrition and Soil Science, 2013, 176, 500-504.	1.9	19
30	Improved assessment of pyrogenic carbon quantity and quality in environmental samples by high-performance liquid chromatography. Journal of Chromatography A, 2013, 1304, 246-250.	3.7	57
31	Quantifying pyrogenic carbon from thermosequences of wood and grass using hydrogen pyrolysis. Organic Geochemistry, 2013, 62, 28-32.	1.8	35
32	Different pools of black carbon in sediments from the Gulf of CÃ¡diz (SW Spain): Method comparison and spatial distribution. Marine Chemistry, 2013, 151, 13-22.	2.3	38
33	Unifying Concepts of Organic Matter Cycling in Soil, River, and Marine Environments. Eos, 2013, 94, 145-145.	0.1	1
34	Rapid molecular screening of black carbon (biochar) thermosequences obtained from chestnut wood and rice straw: A pyrolysis-GC/MS study. Biomass and Bioenergy, 2012, 45, 115-129.	5.7	44
35	Cattle trampling alters soil properties and changes soil microbial communities in a Swiss sub-alpine pasture. Geoderma, 2012, 170, 369-377.	5.1	69
36	Nitrogen addition alters mineralization dynamics of ¹³<scp><scp>C</scp></scp>â€depleted leaf and twig litter and reduces leaching of older <scp>DOC</scp> from mineral soil. Global Change Biology, 2012, 18, 1412-1427.	9.5	68

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37	Fire-derived organic carbon in soil turns over on a centennial scale. Biogeosciences, 2012, 9, 2847-2857.	3.3	190
38	Decomposition pathways of 13C-depleted leaf litter in forest soils of the Swiss Jura. Biogeochemistry, 2012, 108, 395-411.	3.5	32
39	Comparison of gas with liquid chromatography for the determination of benzenepolycarboxylic acids as molecular tracers of black carbon. Organic Geochemistry, 2011, 42, 275-282.	1.8	62
40	C 1s K-edge near edge X-ray absorption fine structure (NEXAFS) spectroscopy for characterizing functional group chemistry of black carbon. Organic Geochemistry, 2011, 42, 1055-1064.	1.8	96
41	Determination of the aromaticity and the degree of aromatic condensation of a thermosequence of wood charcoal using NMR. Organic Geochemistry, 2011, 42, 1194-1202.	1.8	186
42	Persistence of soil organic matter as an ecosystem property. Nature, 2011, 478, 49-56.	27.8	4,243
43	Dissolved carbon leaching from soil is a crucial component of the net ecosystem carbon balance. Global Change Biology, 2011, 17, 1167-1185.	9.5	374
44	Pyrogenic carbon soluble fraction is larger and more aromatic in aged charcoal than in fresh charcoal. Soil Biology and Biochemistry, 2011, 43, 1615-1617.	8.8	136
45	Pyrogenic carbon quantity and quality unchanged after 55 years of organic matter depletion in a Chernozem. Soil Biology and Biochemistry, 2011, 43, 1985-1988.	8.8	35
46	Charcoal quality does not change over a century in a tropical agro-ecosystem. Soil Biology and Biochemistry, 2011, 43, 1992-1994.	8.8	36
47	Lignin content and chemical characteristics in maize and wheat vary between plant organs and growth stages: consequences for assessing lignin dynamics in soil. Plant and Soil, 2011, 343, 369-378.	3.7	39
48	Stable isotopic analysis of pyrogenic organic matter in soils by liquid chromatographyâ€“isotopeâ€ratio mass spectrometry of benzene polycarboxylic acids. Rapid Communications in Mass Spectrometry, 2011, 25, 3723-3731.	1.5	16
49	Summer drought reduces total and litter-derived soil CO₂ effluxes in temperate grassland â€“ clues from a ¹³C litter addition experiment. Biogeosciences, 2010, 7, 1031-1041.	3.3	41
50	Preservation of fire-derived carbon compounds and sorptive stabilisation promote the accumulation of organic matter in black soils of the Southern Alps. Geoderma, 2010, 159, 147-155.	5.1	55
51	The benzene polycarboxylic acid (BPCA) pattern of wood pyrolyzed between 200Â°C and 1000Â°C. Organic Geochemistry, 2010, 41, 1082-1088.	1.8	146
52	Forest-derived lignin biomarkers in an Australian oxisol decrease substantially after 90years of pasture. Organic Geochemistry, 2010, 41, 1219-1224.	1.8	10
53	Mineral fertilization did not affect decay of old lignin and SOC in a ¹³C-labeled arable soil over 36 years. Biogeosciences, 2009, 6, 1139-1148.	3.3	13
54	Dating Charred Soil Organic Matter: Comparison of Radiocarbon Ages from Macrocharcoals and Chemically Separated Charcoal Carbon. Radiocarbon, 2009, 51, 437-443.	1.8	18

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55	Mid-ocean ridge and supra-subduction geochemical signatures in spinelâ€“peridotites from the Neotethyan ophiolites in SW Turkey: Implications for upper mantle melting processes. Lithos, 2009, 113, 691-708.	1.4	110
56	Lignin dynamics in two ¹³Câ€labelled arable soils during 18â€ƒyears. European Journal of Soil Science, 2009, 60, 250-257.	3.9	38
57	How far do experimentally elevated CO₂ levels reach into the surrounding? â€“ An example using the ¹³C label of soil organic matter as an archive. Global Change Biology, 2009, 15, 1598-1602.	9.5	7
58	Effects of sampling design on the probability to detect soil carbon stock changes at the Swiss CarboEurope site LÃgeren. Geoderma, 2009, 149, 347-354.	5.1	46
59	Can we use the CO₂concentrations determined by continuousâ€flow isotope ratio mass spectrometry from small samples for the Keeling plot approach?. Rapid Communications in Mass Spectrometry, 2008, 22, 4029-4034.	1.5	27
60	Characterisation and evaluation of reference materials for black carbon analysis using elemental composition, colour, BET surface area and 13C NMR spectroscopy. Applied Geochemistry, 2008, 23, 2113-2122.	3.0	129
61	Plant and soil lipid modifications under elevated atmospheric CO2 conditions: I. Lipid distribution patterns. Organic Geochemistry, 2008, 39, 91-102.	1.8	46
62	Plant and soil lipid modification under elevated atmospheric CO2 conditions: II. Stable carbon isotopic values (Î´13C) and turnover. Organic Geochemistry, 2008, 39, 103-117.	1.8	45
63	How relevant is recalcitrance for the stabilization of organic matter in soils?. Journal of Plant Nutrition and Soil Science, 2008, 171, 91-110.	1.9	586
64	Comparison of solid-state 13C NMR spectra of soil organic matter from an experimental burning site acquired at two field strengths. Soil Research, 2008, 46, 122.	1.1	7
65	Centennial black carbon turnover observed in a Russian steppe soil. Biogeosciences, 2008, 5, 1339-1350.	3.3	154
66	Conversion of biomass to charcoal and the carbon mass balance from a slash-and-burn experiment in a temperate deciduous forest. Holocene, 2007, 17, 539-542.	1.7	49
67	Lignin is preserved in the fine silt fraction of an arable Luvisol. Organic Geochemistry, 2007, 38, 2001-2011.	1.8	40
68	Pedogenesis of Chernozems in Central Europe â€” A review. Geoderma, 2007, 139, 288-299.	5.1	132
69	Sodium hypochlorite separates an older soil organic matter fraction than acid hydrolysis. Geoderma, 2007, 139, 171-179.	5.1	76
70	Comparison of quantification methods to measure fireâ€derived (black/elemental) carbon in soils and sediments using reference materials from soil, water, sediment and the atmosphere. Global Biogeochemical Cycles, 2007, 21, .	4.9	483
71	Minor changes in soil organic carbon and charcoal concentrations detected in a temperate deciduous forest a year after an experimental slash-and-burn. Biogeosciences, 2007, 4, 377-383.	3.3	49
72	Lignin turnover in arable soil and grassland analysed with two different labelling approaches. European Journal of Soil Science, 2007, 58, 599-608.	3.9	110

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73	Measured soil organic matter fractions can be related to pools in the RothC model. European Journal of Soil Science, 2007, 58, 658-667.	3.9	343
74	Radiocarbon ages of soil charcoals from the southern Alps, Ticino, Switzerland. Nuclear Instruments & Methods in Physics Research B, 2007, 259, 398-402.	1.4	15
75	Prehistoric alteration of soil in the Lower Rhine Basin, Northwest Germanyâ€"archaeological, 14C and geochemical evidence. Geoderma, 2006, 136, 38-50.	5.1	66
76	Synthesis and characterisation of laboratory-charred grass straw (Oryza sativa) and chestnut wood (Castanea sativa) as reference materials for black carbon quantification. Organic Geochemistry, 2006, 37, 1629-1633.	1.8	187
77	Black (pyrogenic) carbon: a synthesis of current knowledge and uncertainties with special consideration of boreal regions. Biogeosciences, 2006, 3, 397-420.	3.3	559
78	Extractable lipid contents and colour in particle-size separates and bulk arable soils. European Journal of Soil Science, 2006, 57, 634-643.	3.9	22
79	Assessing the quantitative reliability of solid-state 13C NMR spectra of kerogens across a gradient of thermal maturity. Solid State Nuclear Magnetic Resonance, 2006, 29, 312-321.	2.3	37
80	Effects of increasing fire frequency on black carbon and organic matter in Podzols of Siberian Scots pine forests. European Journal of Soil Science, 2005, 56, 417-428.	3.9	115
81	Carbon and nitrogen isotope composition of bulk soils, particle-size fractions and organic material after treatment with hydrofluoric acid. European Journal of Soil Science, 2005, 56, 407-416.	3.9	64
82	Improved automated extraction and separation procedure for soil lipid analyses. European Journal of Soil Science, 2004, 55, 349-356.	3.9	68
83	Carbon budget in the black. Nature, 2004, 427, 305-307.	27.8	53
84	Source and turnover of organic matter in agricultural soils derived from n-alkane/n-carboxylic acid compositions and C-isotope signatures. Organic Geochemistry, 2004, 35, 1371-1393.	1.8	37
85	How surface fire in Siberian Scots pine forests affects soil organic carbon in the forest floor: Stocks, molecular structure, and conversion to black carbon (charcoal). Global Biogeochemical Cycles, 2003, 17, .	4.9	157
86	Final recommendations for reference materials in black carbon analysis. Eos, 2003, 84, 582-582.	0.1	33
87	The Earth in accelerated change : habitats in the 21st century : divergence and convergence in geography â€“ approaches and perspectives at the Department of Geography, University of Zurich. Geographica Helvetica, 2003, 58, 184-196.	0.8	1
88	Carbon isotope geochemistry and nanomorphology of soil black carbon: Black chernozemic soils in central Europe originate from ancient biomass burning. Global Biogeochemical Cycles, 2002, 16, 70-1-70-8.	4.9	165
89	Effects of charring on mass, organic carbon, and stable carbon isotope composition of wood. Organic Geochemistry, 2002, 33, 1207-1223.	1.8	237
90	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

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91	Comparative analysis of black carbon in soils. Global Biogeochemical Cycles, 2001, 15, 163-167.	4.9	267
92	Plant Compounds and Their Turnover and Stabilization as Soil Organic Matter. , 2001, , 201-215.		80
93	Airborne Contamination of Forest Soils by Carbonaceous Particles from Industrial Coal Processing. Journal of Environmental Quality, 2000, 29, 768-777.	2.0	27
94	Black carbon in soils and sediments: Analysis, distribution, implications, and current challenges. Global Biogeochemical Cycles, 2000, 14, 777-793.	4.9	1,044
95	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
96	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
97	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
98	Charred organic carbon in German chernozemic soils. European Journal of Soil Science, 1999, 50, 351-365.	3.9	293
99	Particle size fractionation of soil containing coal and combusted particles. European Journal of Soil Science, 1999, 50, 515-522.	3.9	43
100	The Structure of Organic Nitrogen in Particle Size Fractions Determined by 15N CPMAS NMR. , 1999, , 143-149.		4
101	Does ultrasonic dispersion and homogenization by ball milling change the chemical structure of organic matter in geochemical samples?â€"a CPMAS 13C NMR study with lignin. Organic Geochemistry, 1997, 26, 491-496.	1.8	19
102	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
103	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