

# Caroline Ann Masiello

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8187623/publications.pdf>

Version: 2024-02-01

81  
papers

12,157  
citations

71102

41  
h-index

60623

81  
g-index

88  
all docs

88  
docs citations

88  
times ranked

10836  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Apparent Respiratory Quotient of Soils and Tree Stems and the Processes That Control It. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2022, 127, .	3.0	3
2	Nondestructive Chemical Sensing within Bulk Soil Using 1000 Biosensors Per Gram of Matrix. <i>ACS Synthetic Biology</i> , 2022, 11, 2372-2383.	3.8	7
3	Water cost savings from soil biochar amendment: A spatial analysis. <i>GCB Bioenergy</i> , 2021, 13, 133-142.	5.6	13
4	A zero-dimensional view of atmospheric degradation of levoglucosan (LEVCHEM_v1) using numerical chamber simulations. <i>Geoscientific Model Development</i> , 2021, 14, 907-921.	3.6	1
5	Biochar in climate change mitigation. <i>Nature Geoscience</i> , 2021, 14, 883-892.	12.9	263
6	A Split Methyl Halide Transferase AND Gate That Reports by Synthesizing an Indicator Gas. <i>ACS Synthetic Biology</i> , 2020, 9, 3104-3113.	3.8	10
7	First interactions with the hydrologic cycle determine pyrogenic carbon's fate in the Earth system. <i>Earth Surface Processes and Landforms</i> , 2020, 45, 2394-2398.	2.5	12
8	Soil organic matter attenuates the efficacy of flavonoid-based plant-microbe communication. <i>Science Advances</i> , 2020, 6, eaax8254.	10.3	60
9	Translating New Synthetic Biology Advances for Biosensing Into the Earth and Environmental Sciences. <i>Frontiers in Microbiology</i> , 2020, 11, 618373.	3.5	40
10	Policy support for biochar: Review and recommendations. <i>GCB Bioenergy</i> , 2019, 11, 364-380.	5.6	41
11	Anhydrosugars as tracers in the Earth system. <i>Biogeochemistry</i> , 2019, 146, 209-256.	3.5	29
12	Ratiometric Gas Reporting: A Nondisruptive Approach To Monitor Gene Expression in Soils. <i>ACS Synthetic Biology</i> , 2018, 7, 903-911.	3.8	24
13	Effect of freeze-thaw cycling on grain size of biochar. <i>PLoS ONE</i> , 2018, 13, e0191246.	2.5	18
14	Soil Carbon and Nitrogen Responses to Nitrogen Fertilizer and Harvesting Rates in Switchgrass Cropping Systems. <i>Bioenergy Research</i> , 2017, 10, 456-464.	3.9	25
15	Effect of environmental exposure on charcoal density and porosity in a boreal forest. <i>Science of the Total Environment</i> , 2017, 592, 316-325.	8.0	18
16	Carbon sequestration potential and physicochemical properties differ between wildfire charcoals and slow-pyrolysis biochars. <i>Scientific Reports</i> , 2017, 7, 11233.	3.3	93
17	Valuing the Air Quality Effects of Biochar Reductions on Soil NO Emissions. <i>Environmental Science &amp; Technology</i> , 2017, 51, 9856-9863.	10.0	23
18	Plant species, not climate, controls aboveground biomass O <sub>2</sub> :CO <sub>2</sub> exchange ratios in deciduous and coniferous ecosystems. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 2314-2324.	3.0	7

#	ARTICLE	IF	CITATIONS
19	Short-Term Changes in Physical and Chemical Properties of Soil Charcoal Support Enhanced Landscape Mobility. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 3098-3107.	3.0	16
20	Plant-fungal symbiosis affects litter decomposition during primary succession. <i>Oikos</i> , 2017, 126, 801-811.	2.7	9
21	Regional background O <sub>3</sub> and NO <sub>x</sub> in the Houston-Galveston-Brazoria (TX) region: a decadal-scale perspective. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6565-6581.	4.9	8
22	Biochar particle size, shape, and porosity act together to influence soil water properties. <i>PLoS ONE</i> , 2017, 12, e0179079.	2.5	200
23	Thermal Treatment of Hydrocarbon-Impacted Soils: A Review of Technology Innovation for Sustainable Remediation. <i>Engineering</i> , 2016, 2, 426-437.	6.7	188
24	Towards a global assessment of pyrogenic carbon from vegetation fires. <i>Global Change Biology</i> , 2016, 22, 76-91.	9.5	256
25	Biochar physico-chemical properties as affected by environmental exposure. <i>Science of the Total Environment</i> , 2016, 563-564, 237-246.	8.0	110
26	Tree taxa and pyrolysis temperature interact to control the efficacy of pyrogenic organic matter formation. <i>Biogeochemistry</i> , 2016, 130, 103-116.	3.5	22
27	Charcoal Disrupts Soil Microbial Communication through a Combination of Signal Sorption and Hydrolysis. <i>ACS Omega</i> , 2016, 1, 226-233.	3.5	54
28	Volatile Gas Production by Methyl Halide Transferase: An In Situ Reporter Of Microbial Gene Expression In Soil. <i>Environmental Science &amp; Technology</i> , 2016, 50, 8750-8759.	10.0	24
29	Organic geochemical approaches to identifying formation processes for middens and charcoal-rich features. <i>Organic Geochemistry</i> , 2016, 94, 1-11.	1.8	4
30	Biochar interferes with kiwifruit Fe-nutrition in calcareous soil. <i>Geoderma</i> , 2016, 272, 10-19.	5.1	29
31	Impacts of biochar concentration and particle size on hydraulic conductivity and DOC leaching of biochar-sand mixtures. <i>Journal of Hydrology</i> , 2016, 533, 461-472.	5.4	149
32	Pyrolytic Treatment and Fertility Enhancement of Soils Contaminated with Heavy Hydrocarbons. <i>Environmental Science &amp; Technology</i> , 2016, 50, 2498-2506.	10.0	89
33	Forest soil carbon oxidation state and oxidative ratio responses to elevated CO <sub>2</sub> . <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015, 120, 1797-1811.	3.0	19
34	Nutrient Transport in Soils Amended with Biochar: A Transient Model with Two Stationary Phases and Intraparticle Diffusion. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 4123-4135.	3.7	12
35	Chemical and Isotopic Thresholds in Charring: Implications for the Interpretation of Charcoal Mass and Isotopic Data. <i>Environmental Science &amp; Technology</i> , 2015, 49, 14057-14064.	10.0	28
36	Aromaticity and degree of aromatic condensation of char. <i>Organic Geochemistry</i> , 2015, 78, 135-143.	1.8	207

#	ARTICLE	IF	CITATIONS
37	Biochar-Induced Changes in Soil Hydraulic Conductivity and Dissolved Nutrient Fluxes Constrained by Laboratory Experiments. <i>PLoS ONE</i> , 2014, 9, e108340.	2.5	199
38	Controls on the oxidative ratio of net primary production in agricultural ecosystems. <i>Biogeochemistry</i> , 2014, 121, 581-594.	3.5	11
39	New approaches to measuring biochar density and porosity. <i>Biomass and Bioenergy</i> , 2014, 66, 176-185.	5.7	412
40	Charring and non-additive chemical reactions during ramped pyrolysis: Applications to the characterization of sedimentary and soil organic material. <i>Organic Geochemistry</i> , 2014, 77, 106-114.	1.8	30
41	Aged black carbon in marine sediments and sinking particles. <i>Geophysical Research Letters</i> , 2014, 41, 2427-2433.	4.0	94
42	Physical Disintegration of Biochar: An Overlooked Process. <i>Environmental Science and Technology Letters</i> , 2014, 1, 326-332.	8.7	245
43	Biochar and Microbial Signaling: Production Conditions Determine Effects on Microbial Communication. <i>Environmental Science &amp; Technology</i> , 2013, 47, 11496-11503.	10.0	174
44	Toward a "Molecular Thermometer" to Estimate the Charring Temperature of Wildland Charcoals Derived from Different Biomass Sources. <i>Environmental Science &amp; Technology</i> , 2013, 47, 11490-11495.	10.0	34
45	An NMR study of porous rock and biochar containing organic material. <i>Microporous and Mesoporous Materials</i> , 2013, 178, 94-98.	4.4	50
46	Nitrogen, biochar, and mycorrhizae: Alteration of the symbiosis and oxidation of the char surface. <i>Soil Biology and Biochemistry</i> , 2013, 58, 248-254.	8.8	90
47	Estimating the oxidative ratio of the global terrestrial biosphere carbon. <i>Biogeochemistry</i> , 2013, 115, 23-32.	3.5	40
48	Fire in the Ocean. <i>Science</i> , 2013, 340, 287-288.	12.6	33
49	Multiple Controls on the Chemical and Physical Structure of Biochars. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 3587-3597.	3.7	145
50	Dynamics of decadal cycling carbon in subsurface soils. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	48
51	Hydrologic properties of biochars produced at different temperatures. <i>Biomass and Bioenergy</i> , 2012, 41, 34-43.	5.7	394
52	Biochemical Suitability of Crop Residues for Cellulosic Ethanol: Disincentives to Nitrogen Fertilization in Corn Agriculture. <i>Environmental Science &amp; Technology</i> , 2011, 45, 2013-2020.	10.0	24
53	Seasonal dynamics of CO <sub>2</sub> profiles across a soil chronosequence, Santa Cruz, California. <i>Applied Geochemistry</i> , 2011, 26, S132-S134.	3.0	9
54	Earthworm avoidance of biochar can be mitigated by wetting. <i>Soil Biology and Biochemistry</i> , 2011, 43, 1732-1737.	8.8	136

#	ARTICLE	IF	CITATIONS
55	Biochar effects on soil biota – A review. <i>Soil Biology and Biochemistry</i> , 2011, 43, 1812-1836.	8.8	3,514
56	Controls on the origin and cycling of riverine dissolved inorganic carbon in the Brazos River, Texas. <i>Biogeochemistry</i> , 2011, 104, 275-291.	3.5	46
57	Topographic controls on black carbon accumulation in Alaskan black spruce forest soils: implications for organic matter dynamics. <i>Biogeochemistry</i> , 2010, 100, 39-56.	3.5	56
58	Sources of CO <sub>2</sub> evasion from two subtropical rivers in North America. <i>Biogeochemistry</i> , 2010, 100, 211-225.	3.5	39
59	Temperature Sensitivity of Black Carbon Decomposition and Oxidation. <i>Environmental Science &amp; Technology</i> , 2010, 44, 3324-3331.	10.0	314
60	White-Rot Basidiomycete-Mediated Decomposition of C <sub>60</sub> Fullerol. <i>Environmental Science &amp; Technology</i> , 2009, 43, 3162-3168.	10.0	89
61	Measurement of soil carbon oxidation state and oxidative ratio by <sup>13</sup> C nuclear magnetic resonance. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	55
62	Evaluating two experimental approaches for measuring ecosystem carbon oxidation state and oxidative ratio. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	82
63	Comparison of quantification methods to measure fire-derived (black/elemental) carbon in soils and sediments using reference materials from soil, water, sediment and the atmosphere. <i>Global Biogeochemical Cycles</i> , 2007, 21, .	4.9	483
64	Interdisciplinary Intercomparison of Black Carbon Analysis in Soil and Sediment. <i>Eos</i> , 2007, 88, 344.	0.1	3
65	Quick burial at sea. <i>Nature</i> , 2007, 450, 360-361.	27.8	15
66	Controls on black carbon storage in soils. <i>Global Biogeochemical Cycles</i> , 2007, 21, .	4.9	284
67	Is carbon within the global terrestrial biosphere becoming more oxidized? Implications for trends in atmospheric O <sub>2</sub> . <i>Global Change Biology</i> , 2006, 12, 260-271.	9.5	48
68	An ecosystem-scale radiocarbon tracer to test use of litter carbon by ectomycorrhizal fungi. <i>Soil Biology and Biochemistry</i> , 2006, 38, 1077-1082.	8.8	59
69	Young organic matter as a source of carbon dioxide outgassing from Amazonian rivers. <i>Nature</i> , 2005, 436, 538-541.	27.8	521
70	Reburial of fossil organic carbon in marine sediments. <i>Nature</i> , 2004, 427, 336-339.	27.8	231
71	Species-specific measurements of ectomycorrhizal turnover under N-fertilization: combining isotopic and genetic approaches. <i>Oecologia</i> , 2004, 138, 419-425.	2.0	33
72	Cycling and composition of organic matter in terrestrial and marine ecosystems. <i>Marine Chemistry</i> , 2004, 92, 39-64.	2.3	328

#	ARTICLE	IF	CITATIONS
73	New directions in black carbon organic geochemistry. <i>Marine Chemistry</i> , 2004, 92, 201-213.	2.3	664
74	Hydrocarbons in Lake Washington Sediments. A 25-Year Retrospective in an Urban Lake. <i>Environmental Science &amp; Technology</i> , 2004, 38, 431-439.	10.0	40
75	Weathering controls on mechanisms of carbon storage in grassland soils. <i>Global Biogeochemical Cycles</i> , 2004, 18, n/a-n/a.	4.9	194
76	Organic and black carbon $^{13}\text{C}$ and $^{14}\text{C}$ through the Santa Monica Basin sediment oxic-anoxic transition. <i>Geophysical Research Letters</i> , 2003, 30, .	4.0	55
77	Final recommendations for reference materials in black carbon analysis. <i>Eos</i> , 2003, 84, 582-582.	0.1	33
78	Carbon isotope geochemistry of the Santa Clara River. <i>Global Biogeochemical Cycles</i> , 2001, 15, 407-416.	4.9	175
79	Physical controls on dissolved inorganic radiocarbon variability in the California Current. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 1998, 45, 617-642.	1.4	34
80	Distributions of dissolved organic and inorganic carbon and radiocarbon in the eastern North Pacific continental margin. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 1998, 45, 689-713.	1.4	36
81	Black Carbon in Deep-Sea Sediments. <i>Science</i> , 1998, 280, 1911-1913.	12.6	444