Robert B Jackson

List of Publications by Year
in descending order

279 papers	77,707 citations	906 116 h-index	613 259 g-index
317 all docs	317 docs citations	317 times ranked	59765 citing authors

#	Article	IF	Citations
1	Regional trends and drivers of the global methane budget. Global Change Biology, 2022, 28, 182-200.	9.5	56
2	Anthropogenic emission is the main contributor to the rise of atmospheric methane during 1993â€“2017. National Science Review, 2022, 9, nwab200.	9.5	20
3	Methane and NO_x Emissions from Natural Gas Stoves, Cooktops, and Ovens in Residential Homes. Environmental Science & Technology, 2022, 56, 2529-2539.	10.0	60
4	Contrasting responses of woody and grassland ecosystems to increased CO2 as water supply varies. Nature Ecology and Evolution, 2022, 6, 315-323.	7.8	15
5	Plant sizes and shapes above and belowground and their interactions with climate. New Phytologist, 2022, 235, 1032-1056.	7.3	45
6	Global temperature goals should determine the time horizons for greenhouse gas emission metrics. Environmental Research Letters, 2022, 17, 024019.	5.2	31
7	Definitions and methods to estimate regional land carbon fluxes for the second phase of the REgional Carbon Cycle Assessment and Processes Project (RECCAP-2). Geoscientific Model Development, 2022, 15, 1289-1316.	3.6	34
8	Global fossil carbon emissions rebound near pre-COVID-19 levels. Environmental Research Letters, 2022, 17, 031001.	5.2	42
9	Fire effects on the persistence of soil organic matter and long-term carbon storage. Nature Geoscience, 2022, 15, 5-13.	12.9	42
10	Human wellâ€being and per capita energy use. Ecosphere, 2022, 13, .	2.2	13
11	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	9.9	663
12	Land-use emissions embodied in international trade. Science, 2022, 376, 597-603.	12.6	61
13	A 130â€year global inventory of methane emissions from livestock: Trends, patterns, and drivers. Global Change Biology, 2022, 28, 5142-5158.	9.5	17
14	Global patterns of daily CO2 emissions reductions in the first year of COVID-19. Nature Geoscience, 2022, 15, 615-620.	12.9	46
15	Global stocks and capacity of mineral-associated soil organic carbon. Nature Communications, 2022, 13, .	12.8	146
16	Soil organic carbon accumulation rates on Mediterranean abandoned agricultural lands. Science of the Total Environment, 2021, 759, 143535.	8.0	34
17	Climate change extremes and photovoltaic power output. Nature Sustainability, 2021, 4, 270-276.	23.7	72
18	Ten new insights in climate science 2020 â€“ a horizon scan. Global Sustainability, 2021, 4, .	3.3	17

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19	Orphaned oil and gas well stimulusâ€"Maximizing economic and environmental benefits. Elementa, 2021, 9, .	3.2	11
20	Ecosystem Collapse and Climate Change: An Introduction. Ecological Studies, 2021, , 1-9.	1.2	4
21	Decadal changes in fire frequencies shift tree communities and functional traits. Nature Ecology and Evolution, 2021, 5, 504-512.	7.8	41
22	A trade-off between plant and soil carbon storage under elevated CO2. Nature, 2021, 591, 599-603.	27.8	268
23	COVID-19 and Emissions: An Opportunity for Sustainable Global Health. European Heart Journal, 2021, 42, 3415-3417.	2.2	2
24	Fossil CO2 emissions in the post-COVID-19 era. Nature Climate Change, 2021, 11, 197-199.	18.8	171
25	Substantial hysteresis in emergent temperature sensitivity of global wetland CH4 emissions. Nature Communications, 2021, 12, 2266.	12.8	34
26	Plant rhizodeposition: A key factor for soil organic matter formation in stable fractions. Science Advances, 2021, 7, .	10.3	139
27	Carbon analytics for net-zero emissions sustainable cities. Nature Sustainability, 2021, 4, 460-463.	23.7	50
28	Identifying dominant environmental predictors of freshwater wetland methane fluxes across diurnal to seasonal time scales. Global Change Biology, 2021, 27, 3582-3604.	9.5	59
29	Lowâ€intensity frequent fires in coniferous forests transform soil organic matter in ways that may offset ecosystem carbon losses. Global Change Biology, 2021, 27, 3810-3823.	9.5	27
30	Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. Nature Ecology and Evolution, 2021, 5, 1123-1134.	7.8	62
31	Divergent controls of soil organic carbon between observations and process-based models. Biogeochemistry, 2021, 156, 5-17.	3.5	19
32	FLUXNET-CH₄: a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. Earth System Science Data, 2021, 13, 3607-3689.	9.9	79
33	Quantification of global and national nitrogen budgets for crop production. Nature Food, 2021, 2, 529-540.	14.0	108
34	Geochemical evidence for fugitive gas contamination and associated water quality changes in drinking-water wells from Parker County, Texas. Science of the Total Environment, 2021, 780, 146555.	8.0	12
35	Methane removal and the proportional reductions in surface temperature and ozone. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20210104.	3.4	33
36	Atmospheric methane removal: a research agenda. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200454.	3.4	44

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37	Gap-filling eddy covariance methane fluxes: Comparison of machine learning model predictions and uncertainties at FLUXNET-CH4 wetlands. Agricultural and Forest Meteorology, 2021, 308-309, 108528.	4.8	33
38	Global and regional drivers of land-use emissions in 1961â€“2017. Nature, 2021, 589, 554-561.	27.8	256
39	Multiple constraints cause positive and negative feedbacks limiting grassland soil CO₂efflux under CO₂enrichment. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	5
40	Global mapping of crop-specific emission factors highlights hotspots of nitrous oxide mitigation. Nature Food, 2021, 2, 886-893.	14.0	68
41	Magnitude and Uncertainty of Nitrous Oxide Emissions From North America Based on Bottomâ€Up and Topâ€Down Approaches: Informing Future Research and National Inventories. Geophysical Research Letters, 2021, 48, e2021GL095264.	4.0	7
42	Data-driven estimates of global nitrous oxide emissions from croplands. National Science Review, 2020, 7, 441-452.	9.5	95
43	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
44	Carbon dioxide emissions continue to grow amidst slowly emerging climate policies. Nature Climate Change, 2020, 10, 3-6.	18.8	324
45	A comprehensive quantification of global nitrous oxide sources and sinks. Nature, 2020, 586, 248-256.	27.8	814
46	Peak grain forecasts for the US High Plains amid withering waters. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26145-26150.	7.1	12
47	Increasing anthropogenic methane emissions arise equally from agricultural and fossil fuel sources. Environmental Research Letters, 2020, 15, 071002.	5.2	232
48	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	12.9	68
49	Large stocks of peatland carbon and nitrogen are vulnerable to permafrost thaw. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20438-20446.	7.1	307
50	The COVID-19 lockdowns: a window into the Earth System. Nature Reviews Earth & Environment, 2020, 1, 470-481.	29.7	153
51	Methane Emissions from Abandoned Oil and Gas Wells in California. Environmental Science & Technology, 2020, 54, 14617-14626.	10.0	37
52	Homogenization of the terrestrial water cycle. Nature Geoscience, 2020, 13, 656-658.	12.9	242
53	Moving toward Net-Zero Emissions Requires New Alliances for Carbon Dioxide Removal. One Earth, 2020, 3, 145-149.	6.8	61
54	Temporary reduction in daily global CO2 emissions during the COVID-19 forced confinement. Nature Climate Change, 2020, 10, 647-653.	18.8	1,408

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55	Pervasive shifts in forest dynamics in a changing world. Science, 2020, 368, .	12.6	576
56	Climate-driven risks to the climate mitigation potential of forests. Science, 2020, 368, .	12.6	346
57	Agricultural acceleration of soil carbonate weathering. Global Change Biology, 2020, 26, 5988-6002.	9.5	55
58	Repeated fire shifts carbon and nitrogen cycling by changing plant inputs and soil decomposition across ecosystems. Ecological Monographs, 2020, 90, e01409.	5.4	47
59	Global patterns of terrestrial nitrogen and phosphorus limitation. Nature Geoscience, 2020, 13, 221-226.	12.9	541
60	Refining national greenhouse gas inventories. Ambio, 2020, 49, 1581-1586.	5.5	27
61	Advancing ecohydrology in the 21st century: A convergence of opportunities. Ecohydrology, 2020, 13, e2208.	2.4	34
62	Reply to: Practical constraints on atmospheric methane removal. Nature Sustainability, 2020, 3, 358-359.	23.7	3
63	Quantifying Methane Emissions from Natural Gas Water Heaters. Environmental Science & Technology, 2020, 54, 5737-5745.	10.0	28
64	On the role of trend and variability in the hydroxyl radical (OH) in the global methane budget. Atmospheric Chemistry and Physics, 2020, 20, 13011-13022.	4.9	18
65	Influences of hydroxyl radicals (OH) on top-down estimates of the global and regional methane budgets. Atmospheric Chemistry and Physics, 2020, 20, 9525-9546.	4.9	19
66	The Global Methane Budget 2000â€“2017. Earth System Science Data, 2020, 12, 1561-1623.	9.9	1,199
67	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	9.9	1,477
68	Nitrogen and phosphorus constrain the CO2 fertilization of global plant biomass. Nature Climate Change, 2019, 9, 684-689.	18.8	269
69	A first record of bulk atmospheric deposition patterns of major ions in southern South America. Biogeochemistry, 2019, 144, 261-271.	3.5	6
70	Tunable laser-based detection of benzene using spectrally narrow absorption features. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	11
71	The landscape of soil carbon data: Emerging questions, synergies and databases. Progress in Physical Geography, 2019, 43, 707-719.	3.2	27
72	Deep groundwater quality in the southwestern United States. Environmental Research Letters, 2019, 14, 034004.	5.2	18

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73	Flexibility and intensity of global water use. Nature Sustainability, 2019, 2, 515-523.	23.7	106
74	Methane removal and atmospheric restoration. Nature Sustainability, 2019, 2, 436-438.	23.7	96
75	Management intensification maintains wood production over multiple harvests in tropical Eucalyptus plantations. Ecological Applications, 2019, 29, e01879.	3.8	8
76	More than a decade of hydraulic fracturing and horizontal drilling research. Environmental Sciences: Processes and Impacts, 2019, 21, 193-194.	3.5	3
77	Inter-model comparison of global hydroxyl radical (OH) distributions and their impact on atmospheric methane over the 2000â€“2016 period. Atmospheric Chemistry and Physics, 2019, 19, 13701-13723.	4.9	52
78	Persistent fossil fuel growth threatens the Paris Agreement and planetary health. Environmental Research Letters, 2019, 14, 121001.	5.2	133
79	Advancing Scientific Understanding of the Global Methane Budget in Support of the Paris Agreement. Global Biogeochemical Cycles, 2019, 33, 1475-1512.	4.9	73
80	Ungulates mediate tradeâ€offs between carbon storage and wildfire hazard in Mediterranean oak woodlands. Journal of Applied Ecology, 2019, 56, 699-710.	4.0	10
81	Global soil nitrous oxide emissions since the preindustrial era estimated by an ensemble of terrestrial biosphere models: Magnitude, attribution, and uncertainty. Global Change Biology, 2019, 25, 640-659.	9.5	214
82	CO₂ enrichment and soil type additively regulate grassland productivity. New Phytologist, 2019, 222, 183-192.	7.3	9
83	Monthly gridded data product of northern wetland methane emissions based on upscaling eddy covariance observations. Earth System Science Data, 2019, 11, 1263-1289.	9.9	69
84	Global Carbon Budget 2019. Earth System Science Data, 2019, 11, 1783-1838.	9.9	1,159
85	The need to protect fresh and brackish groundwater resources during unconventional oil and gas development. Current Opinion in Environmental Science and Health, 2018, 3, 1-7.	4.1	13
86	Structural and Hydrogeological Controls on Hydrocarbon and Brine Migration into Drinking Water Aquifers in Southern New York. Ground Water, 2018, 56, 225-244.	1.3	31
87	Flowering in grassland predicted by <scp>CO</scp>₂ and resource effects on species aboveground biomass. Global Change Biology, 2018, 24, 1771-1781.	9.5	3
88	The Global N2O Model Intercomparison Project. Bulletin of the American Meteorological Society, 2018, 99, 1231-1251.	3.3	123
89	Coâ€occurring woody species have diverse hydraulic strategies and mortality rates during an extreme drought. Plant, Cell and Environment, 2018, 41, 576-588.	5.7	118
90	Fire frequency drives decadal changes in soil carbon and nitrogen and ecosystem productivity. Nature, 2018, 553, 194-198.	27.8	325

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91	Global energy growth is outpacing decarbonization. Environmental Research Letters, 2018, 13, 120401.	5.2	188
92	Projected drought effects on the demography of Ashe juniper populations inferred from remote measurements of tree canopies. Plant Ecology, 2018, 219, 1259-1267.	1.6	5
93	Accounting for landscape heterogeneity improves spatial predictions of tree vulnerability to drought. New Phytologist, 2018, 220, 132-146.	7.3	31
94	Aerial Interyear Comparison and Quantification of Methane Emissions Persistence in the Bakken Formation of North Dakota, USA. Environmental Science & Technology, 2018, 52, 8947-8953.	10.0	28
95	Global Carbon Budget 2017. Earth System Science Data, 2018, 10, 405-448.	9.9	801
96	Key indicators to track current progress and future ambition of the Paris Agreement. Nature Climate Change, 2017, 7, 118-122.	18.8	298
97	The geochemistry of naturally occurring methane and saline groundwater in an area of unconventional shale gas development. Geochimica Et Cosmochimica Acta, 2017, 208, 302-334.	3.9	121
98	Hydrologic regulation of plant rooting depth. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10572-10577.	7.1	635
99	The Ecology of Soil Carbon: Pools, Vulnerabilities, and Biotic and Abiotic Controls. Annual Review of Ecology, Evolution, and Systematics, 2017, 48, 419-445.	8.3	584
100	Hydrologic resilience and Amazon productivity. Nature Communications, 2017, 8, 387.	12.8	37
101	Towards real-time verification of CO2 emissions. Nature Climate Change, 2017, 7, 848-850.	18.8	168
102	Warning signs for stabilizing global CO ₂ emissions. Environmental Research Letters, 2017, 12, 110202.	5.2	158
103	Measuring canopy loss and climatic thresholds from an extreme drought along a fivefold precipitation gradient across Texas. Global Change Biology, 2017, 23, 5120-5135.	9.5	34
104	A global metaâ€analysis of soil phosphorus dynamics after afforestation. New Phytologist, 2017, 213, 181-192.	7.3	96
105	Focus on negative emissions. Environmental Research Letters, 2017, 12, 110201.	5.2	15
106	Variability and quasi-decadal changes in the methane budget over the period 2000â€“2012. Atmospheric Chemistry and Physics, 2017, 17, 11135-11161.	4.9	85
107	Research priorities for negative emissions. Environmental Research Letters, 2016, 11, 115007.	5.2	138
108	Simulating the Earth system response to negative emissions. Environmental Research Letters, 2016, 11, 095012.	5.2	98

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109	The growing role of methane in anthropogenic climate change. Environmental Research Letters, 2016, 11, 120207.	5.2	274
110	Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming, Field. Environmental Science & Technology, 2016, 50, 4524-4536.	10.0	148
111	Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites. Environmental Science & Technology, 2016, 50, 4877-4886.	10.0	105
112	Quantifying drought-induced tree mortality in the open canopy woodlands of central Texas. Remote Sensing of Environment, 2016, 181, 54-64.	11.0	43
113	Water Use and Management in the Bakken Shale Oil Play in North Dakota. Environmental Science & Technology, 2016, 50, 3275-3282.	10.0	63
114	State of knowledge about energy development impacts on North American rangelands: An integrative approach. Journal of Environmental Management, 2016, 180, 1-9.	7.8	18
115	Response to Comment on â€œImpact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming Fieldâ€• Environmental Science & Technology, 2016, 50, 10771-10772.	10.0	4
116	Canopy foliation and area as predictors of mortality risk from episodic drought for individual trees of Ashe juniper. Plant Ecology, 2016, 217, 1105-1114.	1.6	9
117	Identification and characterization of high methane-emitting abandoned oil and gas wells. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13636-13641.	7.1	143
118	Stabilization of new carbon inputs rather than old carbon decomposition determines soil organic carbon shifts following woody or herbaceous vegetation transitions. Plant and Soil, 2016, 409, 99-116.	3.7	27
119	Salinity of deep groundwater in California: Water quantity, quality, and protection. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7768-7773.	7.1	74
120	Toward more realistic projections of soil carbon dynamics by Earth system models. Global Biogeochemical Cycles, 2016, 30, 40-56.	4.9	343
121	Biophysical and economic limits to negative CO2 emissions. Nature Climate Change, 2016, 6, 42-50.	18.8	973
122	Reaching peak emissions. Nature Climate Change, 2016, 6, 7-10.	18.8	194
123	Reply to 'Greenhouse gas emissions from synthetic natural gas production'. Nature Climate Change, 2016, 6, 221-222.	18.8	0
124	The global methane budget 2000â€“2012. Earth System Science Data, 2016, 8, 697-751.	9.9	824
125	The evolution of Devonian hydrocarbon gases in shallow aquifers of the northern Appalachian Basin: Insights from integrating noble gas and hydrocarbon geochemistry. Geochimica Et Cosmochimica Acta, 2015, 170, 321-355.	3.9	103
126	Quantifying surface albedo and other direct biogeophysical climate forcings of forestry activities. Global Change Biology, 2015, 21, 3246-3266.	9.5	131

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127	Greater humification of belowground than aboveground biomass carbon into particulate soil organic matter in no-till corn and soybean crops. Soil Biology and Biochemistry, 2015, 85, 22-30.	8.8	94
128	Pre-drilling background groundwater quality in the Deep River Triassic Basin of central North Carolina, USA. Applied Geochemistry, 2015, 60, 3-13.	3.0	10
129	News & Views. Ground Water, 2015, 53, 19-28.	1.3	8
130	Soil carbon responses to past and future CO2 in three Texas prairie soils. Soil Biology and Biochemistry, 2015, 83, 66-75.	8.8	15
131	Methane emissions from natural gas infrastructure and use in the urban region of Boston, Massachusetts. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1941-1946.	7.1	225
132	The Depths of Hydraulic Fracturing and Accompanying Water Use Across the United States. Environmental Science & Technology, 2015, 49, 8969-8976.	10.0	65
133	Plant community change mediates the response of foliar Î´15N to CO2 enrichment in mesic grasslands. Oecologia, 2015, 178, 591-601.	2.0	9
134	Elevated levels of diesel range organic compounds in groundwater near Marcellus gas operations are derived from surface activities. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13184-13189.	7.1	130
135	Natural Gas Pipeline Replacement Programs Reduce Methane Leaks and Improve Consumer Safety. Environmental Science and Technology Letters, 2015, 2, 286-291.	8.7	49
136	The integrity of oil and gas wells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10902-10903.	7.1	125
137	Noble gases identify the mechanisms of fugitive gas contamination in drinking-water wells overlying the Marcellus and Barnett Shales. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14076-14081.	7.1	401
138	Geophysical subsurface imaging for ecological applications. New Phytologist, 2014, 201, 1170-1175.	7.3	49
139	Betting on negative emissions. Nature Climate Change, 2014, 4, 850-853.	18.8	846
140	Nitrogen Fertilization Has a Stronger Effect on Soil Nitrogen-Fixing Bacterial Communities than Elevated Atmospheric CO ₂. Applied and Environmental Microbiology, 2014, 80, 3103-3112.	3.1	122
141	Fungal Community Responses to Past and Future Atmospheric CO ₂ Differ by Soil Type. Applied and Environmental Microbiology, 2014, 80, 7364-7377.	3.1	34
142	New Tracers Identify Hydraulic Fracturing Fluids and Accidental Releases from Oil and Gas Operations. Environmental Science & Technology, 2014, 48, 12552-12560.	10.0	136
143	Biophysical forcings of landâ€use changes from potential forestry activities in North America. Ecological Monographs, 2014, 84, 329-353.	5.4	140
144	Shifting carbon pools along a plant cover gradient in woody encroached savannas of central Argentina. Forest Ecology and Management, 2014, 331, 71-78.	3.2	16

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145	The Environmental Costs and Benefits of Fracking. Annual Review of Environment and Resources, 2014, 39, 327-362.	13.4	350
146	Natural Gas Pipeline Leaks Across Washington, DC. Environmental Science & Technology, 2014, 48, 2051-2058.	10.0	180
147	Air Impacts of Increased Natural Gas Acquisition, Processing, and Use: A Critical Review. Environmental Science & Technology, 2014, 48, 8349-8359.	10.0	179
148	Role of aquaporin activity in regulating deep and shallow root hydraulic conductance during extreme drought. Trees - Structure and Function, 2014, 28, 1323-1331.	1.9	43
149	Impacts of climate change drivers on C4 grassland productivity: scaling driver effects through the plant community. Journal of Experimental Botany, 2014, 65, 3415-3424.	4.8	30
150	A Critical Review of the Risks to Water Resources from Unconventional Shale Gas Development and Hydraulic Fracturing in the United States. Environmental Science & Technology, 2014, 48, 8334-8348.	10.0	1,217
151	Priming of soil organic carbon decomposition induced by corn compared to soybean crops. Soil Biology and Biochemistry, 2014, 75, 273-281.	8.8	72
152	Oil and gas wells and their integrity: Implications for shale and unconventional resource exploitation. Marine and Petroleum Geology, 2014, 56, 239-254.	3.3	335
153	Increasing atmospheric ‹scp›CO‹/scp›‹sub›2‹/sub› reduces metabolic and physiological differences between isopreneâ€•and nonâ€isopreneâ€emitting poplars. New Phytologist, 2013, 200, 534-546.	7.3	39
154	The Structure, Distribution, and Biomass of the World's Forests. Annual Review of Ecology, Evolution, and Systematics, 2013, 44, 593-622.	8.3	616
155	Increased stray gas abundance in a subset of drinking water wells near Marcellus shale gas extraction. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11250-11255.	7.1	483
156	Geochemical and isotopic variations in shallow groundwater in areas of the Fayetteville Shale development, north-central Arkansas. Applied Geochemistry, 2013, 35, 207-220.	3.0	134
157	Mapping urban pipeline leaks: Methane leaks across Boston. Environmental Pollution, 2013, 173, 1-4.	7.5	212
158	Shale Gas Extraction in North Carolina: Research Recommendations and Public Health Implications. Environmental Health Perspectives, 2013, 121, A292.	6.0	4
159	Geochemical evidence for possible natural migration of Marcellus Formation brine to shallow aquifers in Pennsylvania. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11961-11966.	7.1	442
160	Soil-mediated effects of subambient to increased carbon dioxide on grassland productivity. Nature Climate Change, 2012, 2, 742-746.	18.8	49
161	Revised calibration of the MBTâ€“CBT paleotemperature proxy based on branched tetraether membrane lipids in surface soils. Geochimica Et Cosmochimica Acta, 2012, 96, 215-229.	3.9	369
162	Global resorption efficiencies and concentrations of carbon and nutrients in leaves of terrestrial plants. Ecological Monographs, 2012, 82, 205-220.	5.4	521

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163	A Global Analysis of Groundwater Recharge for Vegetation, Climate, and Soils. Vadose Zone Journal, 2012, 11, .	2.2	129
164	Ecosystem Impacts of Geoengineering: A Review for Developing a Science Plan. Ambio, 2012, 41, 350-369.	5.5	69
165	Shifts in soil organic carbon for plantation and pasture establishment in native forests and grasslands of South America. Global Change Biology, 2012, 18, 3237-3251.	9.5	114
166	Assessing the potential of wildfires as a sustainable bioenergy opportunity. GCB Bioenergy, 2012, 4, 634-641.	5.6	16
167	Analytical models of soil and litter decomposition: Solutions for mass loss and time-dependent decay rates. Soil Biology and Biochemistry, 2012, 50, 66-76.	8.8	80
168	Common bacterial responses in six ecosystems exposed to 10 years of elevated atmospheric carbon dioxide. Environmental Microbiology, 2012, 14, 1145-1158.	3.8	79
169	A Large and Persistent Carbon Sink in the Worldâ€™s Forests. Science, 2011, 333, 988-993.	12.6	5,393
170	Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8172-8176.	7.1	1,027
171	Response to Comment on â€œPotential Impacts of Leakage from Deep CO₂ Geosequestration on Overlying Freshwater Aquifersâ€• Environmental Science & Technology, 2011, 45, 3175-3176.	10.0	7
172	Biophysical considerations in forestry for climate protection. Frontiers in Ecology and the Environment, 2011, 9, 174-182.	4.0	301
173	Research frontiers in the analysis of coupled biogeochemical cycles. Frontiers in Ecology and the Environment, 2011, 9, 74-80.	4.0	42
174	Water subsidies from mountains to deserts: their role in sustaining groundwater-fed oases in a sandy landscape. , 2011, 21, 678-694.		93
175	A synthesis of current knowledge on forests and carbon storage in the United States. , 2011, 21, 1902-1924.		354
176	Earth Stewardship: science for action to sustain the human-earth system. Ecosphere, 2011, 2, art89.	2.2	154
177	Increases in the flux of carbon belowground stimulate nitrogen uptake and sustain the long-term enhancement of forest productivity under elevated CO2. Ecology Letters, 2011, 14, 349-357.	6.4	374
178	Responses of soil cellulolytic fungal communities to elevated atmospheric CO₂ are complex and variable across five ecosystems. Environmental Microbiology, 2011, 13, 2778-2793.	3.8	56
179	Sources of increased N uptake in forest trees growing under elevated CO2: results of a large-scale 15N study. Global Change Biology, 2011, 17, 3338-3350.	9.5	40
180	Opportunities and barriers to pumped-hydro energy storage in the United States. Renewable and Sustainable Energy Reviews, 2011, 15, 839-844.	16.4	226

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181	Reply to Davies: Hydraulic fracturing remains a possible mechanism for observed methane contamination of drinking water. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, .	7.1	11
182	Atmospheric CO₂and soil extracellular enzyme activity: a meta-analysis and CO₂gradient experiment. Ecosphere, 2011, 2, art96.	2.2	54
183	Reply to Saba and Orzechowski and Schon: Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E665-E666.	7.1	37
184	Reâ€assessment of plant carbon dynamics at the Duke freeâ€air CO₂ enrichment site: interactions of atmospheric [CO₂] with nitrogen and water availability over stand development. New Phytologist, 2010, 185, 514-528.	7.3	242
185	Water uptake and hydraulic redistribution across large woody root systems to 20â€ƒm depth. Plant, Cell and Environment, 2010, 33, 2132-2148.	5.7	147
186	Root responses along a subambient to elevated CO₂ gradient in a C₃â€“C₄ grassland. Global Change Biology, 2010, 16, 454-468.	9.5	27
187	Greater seed production in elevated CO₂ is not accompanied by reduced seed quality in Pinus taeda L.. Global Change Biology, 2010, 16, 1046-1056.	9.5	50
188	Opportunities and Constraints for Forest Climate Mitigation. BioScience, 2010, 60, 698-707.	4.9	46
189	Estimation of longâ€term basin scale evapotranspiration from streamflow time series. Water Resources Research, 2010, 46, .	4.2	64
190	Stoichiometric controls on carbon, nitrogen, and phosphorus dynamics in decomposing litter. Ecological Monographs, 2010, 80, 89-106.	5.4	611
191	Increased belowground biomass and soil CO₂ fluxes after a decade of carbon dioxide enrichment in a warmâ€temperate forest. Ecology, 2009, 90, 3352-3366.	3.2	145
192	Future land use and land cover influences on regional biogenic emissions and air quality in the United States. Atmospheric Environment, 2009, 43, 5771-5780.	4.1	46
193	Ecohydrology in a humanâ€dominated landscape. Ecohydrology, 2009, 2, 383-389.	2.4	93
194	Primary Productivity and Water Balance of Grassland Vegetation on Three Soils in a Continuous CO2 Gradient: Initial Results from the Lysimeter CO2 Gradient Experiment. Ecosystems, 2009, 12, 699-714.	3.4	35
195	Sheep Grazing Decreases Organic Carbon and Nitrogen Pools in the Patagonian Steppe: Combination of Direct and Indirect Effects. Ecosystems, 2009, 12, 686-697.	3.4	98
196	Assessing interactive responses in litter decomposition in mixed species litter. Plant and Soil, 2009, 314, 263-271.	3.7	20
197	Leaf isoprene emission rate as a function of atmospheric CO₂ concentration. Global Change Biology, 2009, 15, 1189-1200.	9.5	144
198	CO2 emissions from forest loss. Nature Geoscience, 2009, 2, 737-738.	12.9	1,095

#	Article	IF	Citations
199	Risks to forest carbon offset projects in a changing climate. Forest Ecology and Management, 2009, 257, 2209-2216.	3.2	136
200	Grazing effects on belowground C and N stocks along a network of cattle exclosures in temperate and subtropical grasslands of South America. Global Biogeochemical Cycles, 2009, 23, .	4.9	100
201	A global metaâ€analysis of soil exchangeable cations, pH, carbon, and nitrogen with afforestation. Ecological Applications, 2009, 19, 2228-2241.	3.8	394
202	Nonlinear rootâ€derived carbon sequestration across a gradient of nitrogen and phosphorous deposition in experimental mesocosms. Global Change Biology, 2008, 14, 1113-1124.	9.5	58
203	Soil carbon sequestration in a pine forest after 9 years of atmospheric CO₂ enrichment. Global Change Biology, 2008, 14, 2910-2922.	9.5	82
204	Fineâ€root respiration in a loblolly pine (Pinus taeda L.) forest exposed to elevated CO₂ and N fertilization. Plant, Cell and Environment, 2008, 31, 1663-1672.	5.7	60
205	Regional patterns and controls of ecosystem salinization with grassland afforestation along a rainfall gradient. Global Biogeochemical Cycles, 2008, 22, .	4.9	58
206	Stream acidification and base cation losses with grassland afforestation. Water Resources Research, 2008, 44, .	4.2	41
207	The Global Stoichiometry of Litter Nitrogen Mineralization. Science, 2008, 321, 684-686.	12.6	526
208	Measuring uncertainty in estimates of biodiversity loss: The example of biodiversity intactness variance. Biological Conservation, 2008, 141, 1091-1094.	4.1	15
209	Hydraulic traits are influenced by phylogenetic history in the droughtâ€resistant, invasive genus Juniperus (Cupressaceae). American Journal of Botany, 2008, 95, 299-314.	1.7	131
210	Protecting climate with forests. Environmental Research Letters, 2008, 3, 044006.	5.2	313
211	Increases in nitrogen uptake rather than nitrogen-use efficiency support higher rates of temperate forest productivity under elevated CO ₂. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14014-14019.	7.1	353
212	Groundwater and soil chemical changes under phreatophytic tree plantations. Journal of Geophysical Research, 2007, 112, .	3.3	55
213	Effects of elevated atmospheric carbon dioxide on amino acid and NH₄⁺â€N cycling in a temperate pine ecosystem. Global Change Biology, 2007, 13, 1950-1959.	9.5	37
214	Aquaporinâ€mediated changes in hydraulic conductivity of deep tree roots accessed via caves. Plant, Cell and Environment, 2007, 30, 1411-1421.	5.7	82
215	Metagenomic and Small-Subunit rRNA Analyses Reveal the Genetic Diversity of Bacteria, Archaea, Fungi, and Viruses in Soil. Applied and Environmental Microbiology, 2007, 73, 7059-7066.	3.1	480
216	Predicting the temperature dependence of microbial respiration in soil: A continental-scale analysis. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	4.9	222

#	Article	IF	Citations
217	Xylem cavitation caused by drought and freezing stress in four co-occurring Juniperus species. Physiologia Plantarum, 2006, 127, 374-382.	5.2	89
218	Functional coordination between leaf gas exchange and vulnerability to xylem cavitation in temperate forest trees. Plant, Cell and Environment, 2006, 29, 571-583.	5.7	184
219	Inhibition of Nitrification Alters Carbon Turnover in the Patagonian Steppe. Ecosystems, 2006, 9, 1257-1265.	3.4	43
220	Elevated CO2 reduces disease incidence and severity of a red maple fungal pathogen via changes in host physiology and leaf chemistry. Global Change Biology, 2005, 11, 1828-1836.	9.5	100
221	Effects of afforestation on water yield: a global synthesis with implications for policy. Global Change Biology, 2005, 11, 1565-1576.	9.5	822
222	GENETIC VARIANCE AND COVARIANCE FOR PHYSIOLOGICAL TRAITS IN LOBELIA:ARE THERE CONSTRAINTS ON ADAPTIVE EVOLUTION?. Evolution; International Journal of Organic Evolution, 2005, 59, 826-837.	2.3	40
223	Responses of tropical native and invader C4 grasses to water stress, clipping and increased atmospheric CO2 concentration. Oecologia, 2005, 145, 522-532.	2.0	35
224	Trading Water for Carbon with Biological Carbon Sequestration. Science, 2005, 310, 1944-1947.	12.6	1,014
225	ECOHYDROLOGICAL CONTROL OF DEEP DRAINAGE IN ARID AND SEMIARID REGIONS. Ecology, 2005, 86, 277-287.	3.2	159
226	From icy roads to salty streams. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14487-14488.	7.1	171
227	Mapping the global distribution of deep roots in relation to climate and soil characteristics. Geoderma, 2005, 126, 129-140.	5.1	287
228	Hydrological consequences of Eucalyptus afforestation in the Argentine Pampas. Water Resources Research, 2005, 41, .	4.2	141
229	ECOHYDROLOGICAL IMPLICATIONS OF WOODY PLANT ENCROACHMENT. Ecology, 2005, 86, 308-319.	3.2	582
230	Curbing the U.S. carbon deficit. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15827-15829.	7.1	57
231	CORRECTIONS AND CLARIFICATIONS. Science, 2004, 304, 51a-51a.	12.6	2
232	Groundwater use and salinization with grassland afforestation. Global Change Biology, 2004, 10, 1299-1312.	9.5	188
233	Variation in xylem structure and function in stems and roots of trees to 20Âm depth. New Phytologist, 2004, 163, 507-517.	7.3	243
234	THE UPLIFT OF SOIL NUTRIENTS BY PLANTS: BIOGEOCHEMICAL CONSEQUENCES ACROSS SCALES. Ecology, 2004, 85, 2380-2389.	3.2	578

#	Article	IF	Citations
235	ADAPTIVE VARIATION IN THE VULNERABILITY OF WOODY PLANTS TO XYLEM CAVITATION. Ecology, 2004, 85, 2184-2199.	3.2	584
236	Stomatal sensitivity to vapour pressure difference over a subambient to elevated CO2 gradient in a C3 /C4 grassland. Plant, Cell and Environment, 2003, 26, 1297-1306.	5.7	36
237	On the relationship between stomatal characters and atmospheric CO2. Geophysical Research Letters, 2003, 30, .	4.0	53
238	Regional feedbacks among fire, climate, and tropical deforestation. Journal of Geophysical Research, 2003, 108, .	3.3	68
239	DEFINING A PLANT'S BELOWGROUND ZONE OF INFLUENCE. Ecology, 2003, 84, 2313-2321.	3.2	195
240	Positive feedbacks of fire, climate, and vegetation and the conversion of tropical savanna. Geophysical Research Letters, 2002, 29, 9-1-9-4.	4.0	95
241	MEETING ECOLOGICAL AND SOCIETAL NEEDS FOR FRESHWATER. , 2002, 12, 1247-1260.		448
242	THE GLOBAL BIOGEOGRAPHY OF ROOTS. Ecological Monographs, 2002, 72, 311-328.	5.4	816
243	Root production and demography in a california annual grassland under elevated atmospheric carbon dioxide. Global Change Biology, 2002, 8, 841-850.	9.5	41
244	Rooting depths, lateral root spreads and belowâ€ground/aboveâ€ground allometries of plants in waterâ€limited ecosystems. Journal of Ecology, 2002, 90, 480-494.	4.0	1,081
245	Stomatal acclimation over a subambient to elevated CO2 gradient in a C3 /C4 grassland. Plant, Cell and Environment, 2002, 25, 557-566.	5.7	117
246	Ecosystem carbon loss with woody plant invasion of grasslands. Nature, 2002, 418, 623-626.	27.8	833
247	Nonlinear grassland responses to past and future atmospheric CO2. Nature, 2002, 417, 279-282.	27.8	278
248	MEETING ECOLOGICAL AND SOCIETAL NEEDS FOR FRESHWATER. , 2002, 12, 1247.		1
249	Meeting Ecological and Societal Needs for Freshwater. , 2002, 12, 1247.		7
250	The Global Biogeography of Roots. Ecological Monographs, 2002, 72, 311.	5.4	26
251	WATER IN A CHANGING WORLD. , 2001, 11, 1027-1045.		709
252	WATER AND TREEâ€“UNDERSTORY INTERACTIONS: A NATURAL EXPERIMENT IN A SAVANNA WITH OAK WILT. Ecology, 2001, 82, 33-49.	3.2	17

#	Article	IF	Citations
253	Gas exchange and photosynthetic acclimation over subambient to elevated CO2 in a C3 -C4 grassland. Global Change Biology, 2001, 7, 693-707.	9.5	129
254	Plant physiological ecology: linking the organism to scales above and below. New Phytologist, 2001, 149, 12-16.	7.3	6
255	The distribution of soil nutrients with depth: Global patterns and the imprint of plants. Biogeochemistry, 2001, 53, 51-77.	3.5	850
256	Below-Ground Processes in Gap Models for Simulating Forest Response to Global Change. Climatic Change, 2001, 51, 449-473.	3.6	31
257	WATER IN A CHANGING WORLD. , 2001, 11, 1027.		2
258	Root dynamics and global change: seeking an ecosystem perspective. New Phytologist, 2000, 147, 3-12.	7.3	333
259	Global patterns of root turnover for terrestrial ecosystems. New Phytologist, 2000, 147, 13-31.	7.3	976
260	Global controls of forest line elevation in the northern and southern hemispheres. Global Ecology and Biogeography, 2000, 9, 253-268.	5.8	192
261	Elevated CO 2 enhances resprouting of a tropical savanna tree. Oecologia, 2000, 123, 312-317.	2.0	78
262	Commentary: Carbon Metabolism of the Terrestrial Biosphere: A Multitechnique Approach for Improved Understanding. Ecosystems, 2000, 3, 115-130.	3.4	225
263	BELOWGROUND CONSEQUENCES OF VEGETATION CHANGE AND THEIR TREATMENT IN MODELS. , 2000, 10, 470-483.		295
264	Global Biodiversity Scenarios for the Year 2100 . Science, 2000, 287, 1770-1774.	12.6	7,077
265	Root water uptake and transport: using physiological processes in global predictions. Trends in Plant Science, 2000, 5, 482-488.	8.8	496
266	THE VERTICAL DISTRIBUTION OF SOIL ORGANIC CARBON AND ITS RELATION TO CLIMATE AND VEGETATION. , 2000, 10, 423-436.		3,759
267	THE VERTICAL DISTRIBUTION OF SOIL ORGANIC CARBON AND ITS RELATION TO CLIMATE AND VEGETATION. , 2000, 10, 423.		6
268	Ecosystem rooting depth determined with caves and DNA. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 11387-11392.	7.1	241
269	Ecosystem water fluxes for two grasslands in elevated CO 2 : a modeling analysis. Oecologia, 1998, 113, 537-546.	2.0	38
270	Downward flux of water through roots (i.e. inverse hydraulic lift) in dry Kalahari sands. Oecologia, 1998, 115, 460-462.	2.0	142

#	Article	IF	Citations
271	A global budget for fine root biomass, surface area, and nutrient contents. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 7362-7366.	7.1	1,189
272	PLANT COMPETITION UNDERGROUND. Annual Review of Ecology, Evolution, and Systematics, 1997, 28, 545-570.	6.7	889
273	The fate of carbon in grasslands under carbon dioxide enrichment. Nature, 1997, 388, 576-579.	27.8	444
274	Maximum rooting depth of vegetation types at the global scale. Oecologia, 1996, 108, 583-595.	2.0	1,505
275	A global analysis of root distributions for terrestrial biomes. Oecologia, 1996, 108, 389-411.	2.0	2,353
276	Rooting depth, water availability, and vegetation cover along an aridity gradient in Patagonia. Oecologia, 1996, 108, 503-511.	2.0	282
277	Stomatal responses to increased CO2: implications from the plant to the global scale. Plant, Cell and Environment, 1995, 18, 1214-1225.	5.7	702
278	CO2 alters water use, carbon gain, and yield for the dominant species in a natural grassland. Oecologia, 1994, 98, 257-262.	2.0	207
279	Geostatistical Patterns of Soil Heterogeneity Around Individual Perennial Plants. Journal of Ecology, 1993, 81, 683.	4.0	424