Stephen W Pacala

List of Publications by Year
in descending order

59	12,485	116194	169272
papers	citations	36 h-index	56 g-index

60	60	60	19287
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Maintenance of high diversity in mechanistic forest dynamics models of competition for light. Ecological Monographs, 2022, 92, .	2.4	16
2	Competition for water and species coexistence in phenologically structured annual plant communities. Ecology Letters, 2022, 25, 1110-1125.	3.0	7
3	Plant hydraulics, stomatal control, and the response of a tropical forest to water stress over multiple temporal scales. Global Change Biology, 2022, 28, 4359-4376.	4.2	6
4	Resolution of Respect Robert M. May (1936â€“2020). Bulletin of the Ecological Society of America, 2021, 102, e01769.	0.2	0
5	Future paths for the â€˜exploitative segregation of plant rootsâ€™ model. Plant Signaling and Behavior, 2021, 16, 1891755.	1.2	3
6	Unusual characteristics of the carbon cycle during the 2015â^'2016 El NiÃ±o. Global Change Biology, 2021, 27, 3798-3809.	4.2	6
7	The importance of Durrett and Levin (1994): â€œThe importance of being discrete (and spatial)â€• Theoretical Population Biology, 2020, 133, 33-34.	0.5	9
8	The exploitative segregation of plant roots. Science, 2020, 370, 1197-1199.	6.0	70
9	Allometric constraints and competition enable the simulation of size structure and carbon fluxes in a dynamic vegetation model of tropical forests (LM3PPAâ€TV). Global Change Biology, 2020, 26, 4478-4494.	4.2	24
10	Climate-driven risks to the climate mitigation potential of forests. Science, 2020, 368, .	6.0	346
11	Bias in the detection of negative density dependence in plant communities. Ecology Letters, 2019, 22, 1923-1939.	3.0	84
12	Natural climate solutions are not enough. Science, 2019, 363, 933-934.	6.0	104
13	Predicting shifts in the functional composition of tropical forests under increased drought and <scp>CO</scp>₂ from tradeâ€offs among plant hydraulic traits. Ecology Letters, 2019, 22, 67-77.	3.0	43
14	Woody plants optimise stomatal behaviour relative to hydraulic risk. Ecology Letters, 2018, 21, 968-977.	3.0	109
15	Edge fires drive the shape and stability of tropical forests. Ecology Letters, 2018, 21, 794-803.	3.0	15
16	The role of succession in the evolution of flammability. Theoretical Ecology, 2018, 11, 291-303.	0.4	1
17	Functional groups, species and light interact with nutrient limitation during tropical rainforest sapling bottleneck. Journal of Ecology, 2018, 106, 157-167.	1.9	21
18	Differential declines in Alaskan boreal forest vitality related to climate and competition. Global Change Biology, 2018, 24, 1097-1107.	4.2	37

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19	Hydraulic diversity of forests regulates ecosystem resilience during drought. Nature, 2018, 561, 538-541.	13.7	332
20	Divergent drivers of leaf trait variation within species, among species, and among functional groups. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5480-5485.	3.3	94
21	Assessment of methane emissions from the U.S. oil and gas supply chain. Science, 2018, 361, 186-188.	6.0	519
22	Convergence of bark investment according to fire and climate structures ecosystem vulnerability to future change. Ecology Letters, 2017, 20, 307-316.	3.0	90
23	Unmask temporal trade-offs in climate policy debates. Science, 2017, 356, 492-493.	6.0	80
24	Why are nitrogenâ€fixing trees rare at higher compared to lower latitudes?. Ecology, 2017, 98, 3127-3140.	1.5	32
25	Variations of leaf longevity in tropical moist forests predicted by a traitâ€driven carbon optimality model. Ecology Letters, 2017, 20, 1097-1106.	3.0	48
26	Predicting vegetation type through physiological and environmental interactions with leaf traits: evergreen and deciduous forests in an earth system modeling framework. Global Change Biology, 2017, 23, 2482-2498.	4.2	33
27	Plant water potential improves prediction of empirical stomatal models. PLoS ONE, 2017, 12, e0185481.	1.1	77
28	Optimal stomatal behavior with competition for water and risk of hydraulic impairment. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7222-E7230.	3.3	215
29	Decreased water limitation under elevated CO ₂ amplifies potential for forest carbon sinks. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7213-7218.	3.3	53
30	Reconciling divergent estimates of oil and gas methane emissions. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15597-15602.	3.3	209
31	Tropical nighttime warming as a dominant driver of variability in the terrestrial carbon sink. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15591-15596.	3.3	92
32	Density-dependent speciation alters the structure and dynamics of neutral communities. Journal of Theoretical Biology, 2015, 372, 128-134.	0.8	1
33	Contrasting Local versus Regional Effects of Land-Use-Change-Induced Heterogeneity on Historical Climate: Analysis with the GFDL Earth System Model. Journal of Climate, 2015, 28, 5448-5469.	1.2	60
34	Microbe-driven turnover offsets mineral-mediated storage of soil carbon under elevated CO2. Nature Climate Change, 2014, 4, 1099-1102.	8.1	309
35	The emergence and promise of functional biogeography. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13690-13696.	3.3	525
36	A modelâ€based metaâ€analysis for estimating speciesâ€specific wood density and identifying potential sources of variation. Journal of Ecology, 2014, 102, 194-208.	1.9	19

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37	Species-Independent Down-Regulation of Leaf Photosynthesis and Respiration in Response to Shading: Evidence from Six Temperate Tree Species. PLoS ONE, 2014, 9, e91798.	1.1	15
38	Land use change and nitrogen feedbacks constrain the trajectory of the land carbon sink. Geophysical Research Letters, 2013, 40, 5218-5222.	1.5	40
39	Interspecific vs intraspecific patterns in leaf nitrogen of forest trees across nitrogen availability gradients. New Phytologist, 2013, 200, 112-121.	3.5	20
40	Competition for Water and Light in Closed-Canopy Forests: A Tractable Model of Carbon Allocation with Implications for Carbon Sinks. American Naturalist, 2013, 181, 314-330.	1.0	87
41	Resource limitation in a competitive context determines complex plant responses to experimental resource additions. Ecology, 2013, 94, 2505-2517.	1.5	92
42	Greater focus needed on methane leakage from natural gas infrastructure. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6435-6440.	3.3	576
43	A forest structure model that determines crown layers and partitions growth and mortality rates for landscapeâ€scale applications of tropical forests. Journal of Ecology, 2012, 100, 508-518.	1.9	48
44	A Large and Persistent Carbon Sink in the Worldâ€™s Forests. Science, 2011, 333, 988-993.	6.0	5,393
45	Theory predicts a rapid transition from niche-structured to neutral biodiversity patterns across a speciation-rate gradient. Theoretical Ecology, 2011, 4, 195-200.	0.4	31
46	Local diversity in heterogeneous landscapes: quantitative assessment with a height-structured forest metacommunity model. Theoretical Ecology, 2011, 4, 269-281.	0.4	12
47	Nitrogen cycling and feedbacks in a global dynamic land model. Global Biogeochemical Cycles, 2010, 24, .	1.9	173
48	Carbon cycling under 300 years of land use change: Importance of the secondary vegetation sink. Global Biogeochemical Cycles, 2009, 23, .	1.9	338
49	SCALING FROM TREES TO FORESTS: TRACTABLE MACROSCOPIC EQUATIONS FOR FOREST DYNAMICS. Ecological Monographs, 2008, 78, 523-545.	2.4	208
50	Predictive Models of Forest Dynamics. Science, 2008, 320, 1452-1453.	6.0	306
51	FISH AGGREGATION RESULTS IN INVERSELY DENSITY-DEPENDENT PREDATION ON CONTINUOUS CORAL REEFS. Ecology, 2005, 86, 1520-1530.	1.5	51
52	BEYOND POTENTIAL VEGETATION: COMBINING LIDAR DATA AND A HEIGHT-STRUCTURED MODEL FOR CARBON STUDIES. , 2004, 14, 873-883.		134
53	Impact of historical land cover change on the July climate of the United States. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	47
54	POPULATION REGULATION: HISTORICAL CONTEXT AND CONTEMPORARY CHALLENGES OF OPEN VS. CLOSED SYSTEMS. Ecology, 2002, 83, 1490-1508.	1.5	307

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55	Successional diversity and forest ecosystem function. Ecological Research, 2001, 16, 895-903.	0.7	142
56	Contributions of Land-Use History to Carbon Accumulation in U.S. Forests. Science, 2000, 290, 1148-1151.	6.0	452
57	ERROR PROPAGATION IN A FOREST SUCCESSION MODEL:THE ROLE OF FINE-SCALE HETEROGENEITY IN LIGHT. Ecology, 1999, 80, 1927-1943.	1.5	50
58	LINEAR ANALYSIS OF SOIL DECOMPOSITION: INSIGHTS FROM THE CENTURY MODEL. , 1998, 8, 425-439.		91
59	Effects of social group size on information transfer and task allocation. Evolutionary Ecology, 1996, 10, 127-165.	0.5	161