

Karl J Niklas

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

204
papers

9,576
citations

46
h-index

93
g-index

211
ext. papers

11,266
ext. citations

5.4
avg, IF

6.77
L-index

#	Paper	IF	Citations
204	Diminishing returns among lamina fresh and dry mass, surface area, and petiole fresh mass among nine Lauraceae species.. <i>American Journal of Botany</i> , 2022 ,	2.7	1
203	Influence of Leaf Age on the Scaling Relationships of Lamina Mass vs. Area.. <i>Frontiers in Plant Science</i> , 2022 , 13, 860206	6.2	0
202	Ecosystem organic carbon storage and their drivers across the drylands of China. <i>Catena</i> , 2022 , 214, 106380	3.8	1
201	Scaling relationships of leaf vein and areole traits versus leaf size for nine Magnoliaceae species differing in venation density.. <i>American Journal of Botany</i> , 2022 ,	2.7	2
200	Identification of approximate symmetries in biological development. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200273	3	1
199	Global synthesis for the scaling of soil microbial nitrogen to phosphorus in terrestrial ecosystems. <i>Environmental Research Letters</i> , 2021 , 16, 044034	6.2	3
198	The Challenges of Inferring Organic Function from Structure and Its Emulation in Biomechanics and Biomimetics. <i>Biomimetics</i> , 2021 , 6,	3.7	3
197	Effects of biotic and abiotic factors on forest biomass fractions. <i>National Science Review</i> , 2021 , 8, nwab025.8	25.8	13
196	Evolution of Cellular Differentiation: From Hypotheses to Models. <i>Trends in Ecology and Evolution</i> , 2021 , 36, 49-60	10.9	10
195	A General Model for Describing the Ovate Leaf Shape. <i>Symmetry</i> , 2021 , 13, 1524	2.7	2
194	"Diminishing returns" for leaves of five age-groups of <i>Phyllostachys edulis</i> culms. <i>American Journal of Botany</i> , 2021 , 108, 1662-1672	2.7	4
193	Environmental-Biomechanical Reciprocity and the Evolution of Plant Material Properties. <i>Journal of Experimental Botany</i> , 2021 ,	7	2
192	Linking ecomechanical models and functional traits to understand phenotypic diversity. <i>Trends in Ecology and Evolution</i> , 2021 , 36, 860-873	10.9	11
191	Divergent scaling of fine-root nitrogen and phosphorus in different root diameters, orders and functional categories: A meta-analysis. <i>Forest Ecology and Management</i> , 2021 , 495, 119384	3.9	0
190	A Superellipse with Deformation and Its Application in Describing the Cross-Sectional Shapes of a Square Bamboo. <i>Symmetry</i> , 2020 , 12, 2073	2.7	8
189	The Leaf Economics Spectrum Constrains Phenotypic Plasticity Across a Light Gradient. <i>Frontiers in Plant Science</i> , 2020 , 11, 735	6.2	4
188	Leaf Bilateral Symmetry and the Scaling of the Perimeter vs. the Surface Area in 15 Vine Species. <i>Forests</i> , 2020 , 11, 246	2.8	13

187	Morphological (and not anatomical or reproductive) features define early vascular plant phylogenetic relationships. <i>American Journal of Botany</i> , 2020 , 107, 477-488	2.7	3
186	Leaf shape influences the scaling of leaf dry mass vs. area: a test case using bamboos. <i>Annals of Forest Science</i> , 2020 , 77, 1	3.1	21
185	The many roads to and from multicellularity. <i>Journal of Experimental Botany</i> , 2020 , 71, 3247-3253	7	7
184	Comparison of the Scaling Relationships of Leaf Biomass versus Surface Area between Spring and Summer for Two Deciduous Tree Species. <i>Forests</i> , 2020 , 11, 1010	2.8	14
183	Water content quantitatively affects metabolic rates over the course of plant ontogeny. <i>New Phytologist</i> , 2020 , 228, 1524-1534	9.8	9
182	Nondestructive estimation of leaf area for 15 species of vines with different leaf shapes. <i>American Journal of Botany</i> , 2020 , 107, 1481-1490	2.7	21
181	Allocation Strategies for Seed Nitrogen and Phosphorus in an Alpine Meadow Along an Altitudinal Gradient on the Tibetan Plateau. <i>Frontiers in Plant Science</i> , 2020 , 11, 614644	6.2	3
180	The Evolution of Early Vascular Plant Complexity. <i>International Journal of Plant Sciences</i> , 2019 , 180, 800-810	6	6
179	The scaling relationships of leaf biomass vs. leaf surface area of 12 bamboo species. <i>Global Ecology and Conservation</i> , 2019 , 20, e00793	2.8	17
178	A general review of the biomechanics of root anchorage. <i>Journal of Experimental Botany</i> , 2019 , 70, 3439-3451	30	30
177	Lamina shape does not correlate with lamina surface area: An analysis based on the simplified Gielis equation. <i>Global Ecology and Conservation</i> , 2019 , 19, e00666	2.8	21
176	Influence of the physical dimension of leaf size measures on the goodness of fit for Taylor's power law using 101 bamboo taxa. <i>Global Ecology and Conservation</i> , 2019 , 19, e00657	2.8	3
175	Life history strategies drive size-dependent biomass allocation patterns of dryland ephemerals and shrubs. <i>Ecosphere</i> , 2019 , 10, e02709	3.1	11
174	Stem Diameter (and Not Length) Limits Twig Leaf Biomass. <i>Frontiers in Plant Science</i> , 2019 , 10, 185	6.2	7
173	The scaling of fine root nitrogen versus phosphorus in terrestrial plants: A global synthesis. <i>Functional Ecology</i> , 2019 , 33, 2081-2094	5.6	17
172	Plant biomechanics in the 21st century. <i>Journal of Experimental Botany</i> , 2019 , 70, 3435-3438	7	11
171	Stem and leaf growth rates define the leaf size vs. number trade-off. <i>AoB PLANTS</i> , 2019 , 11, plz063	2.9	6
170	Polarity, planes of cell division, and the evolution of plant multicellularity. <i>Protoplasma</i> , 2019 , 256, 585-599	6	6

169	Historical roots and current status of plant physiology. <i>Plant Signaling and Behavior</i> , 2019 , 14, 1552058	2.5	78
168	On the Interpretation of the Normalization Constant in the Scaling Equation. <i>Frontiers in Ecology and Evolution</i> , 2019 , 6,	3.7	9
167	The evolutionary origins of cell type diversification and the role of intrinsically disordered proteins. <i>Journal of Experimental Botany</i> , 2018 , 69, 1437-1446	7	29
166	Phloem networks in leaves. <i>Current Opinion in Plant Biology</i> , 2018 , 43, 29-35	9.9	20
165	Global leaf nitrogen and phosphorus stoichiometry and their scaling exponent. <i>National Science Review</i> , 2018 , 5, 728-739	10.8	52
164	Early Tracheophyte Phylogeny 2018 , 69-92		2
163	Julius von Sachs' forgotten 1897-article: sexuality and gender in plants vs. humans. <i>Plant Signaling and Behavior</i> , 2018 , 13, e1489671	2.5	4
162	Dynamical Patterning Modules Link Genotypes to Morphological Phenotypes in Multicellular Evolution 2018 , 235-266		1
161	Dynamical Patterning Modules, Biogenic Materials, and the Evolution of Multicellular Plants. <i>Frontiers in Plant Science</i> , 2018 , 9, 871	6.2	19
160	Global Data Analysis Shows That Soil Nutrient Levels Dominate Foliar Nutrient Resorption Efficiency in Herbaceous Species. <i>Frontiers in Plant Science</i> , 2018 , 9, 1431	6.2	11
159	Julius Sachs (1868): The father of plant physiology. <i>American Journal of Botany</i> , 2018 , 105, 656-666	2.7	8
158	The scaling of the hydraulic architecture in poplar leaves. <i>New Phytologist</i> , 2017 , 214, 145-157	9.8	23
157	Evidence for a Strong Correlation Between Transcription Factor Protein Disorder and Organismic Complexity. <i>Genome Biology and Evolution</i> , 2017 , 9, 1248-1265	3.9	33
156	Identifying Morphological and Mechanical Traits Associated with Stem Lodging in Bioenergy Sorghum (<i>Sorghum bicolor</i>). <i>Bioenergy Research</i> , 2017 , 10, 635-647	3.1	20
155	The hydraulic architecture of Ginkgo leaves. <i>American Journal of Botany</i> , 2017 , 104, 1285-1298	2.7	15
154	Size-dependent variation in plant form. <i>Current Biology</i> , 2017 , 27, R900-R905	6.3	5
153	"Diminishing returns" in the scaling of leaf area vs. dry mass in Wuyi Mountain bamboos, Southeast China. <i>American Journal of Botany</i> , 2017 , 104, 993-998	2.7	21
152	Boron and the evolutionary development of roots. <i>Plant Signaling and Behavior</i> , 2017 , 12, e1320631	2.5	9

151	Leaping lizards landing on leaves: escape-induced jumps in the rainforest canopy challenge the adhesive limits of geckos. <i>Journal of the Royal Society Interface</i> , 2017 , 14,	4.1	11
150	The evolution of hydrophobic cell wall biopolymers: from algae to angiosperms. <i>Journal of Experimental Botany</i> , 2017 , 68, 5261-5269	7	41
149	From Goethe's plant archetype via Haeckel's biogenetic law to plant evo-devo 2016. <i>Theory in Biosciences</i> , 2017 , 136, 49-57	1.3	3
148	The evolutionary ecology (evo-eco) of plant asexual reproduction. <i>Evolutionary Ecology</i> , 2017 , 31, 317-332	1.3	9
147	A predictive nondestructive model for the covariation of tree height, diameter, and stem volume scaling relationships. <i>Scientific Reports</i> , 2016 , 6, 31008	4.9	4
146	Spatiotemporal distribution of essential elements through <i>Populus</i> leaf ontogeny. <i>Journal of Experimental Botany</i> , 2016 , 67, 2777-86	7	6
145	The evolution of the plant genome-to-morphology auxin circuit. <i>Theory in Biosciences</i> , 2016 , 135, 175-86	1.3	5
144	Tree Biomechanics with Special Reference to Tropical Trees. <i>Tree Physiology</i> , 2016 , 413-435		3
143	Plant Evolution 2016 ,		22
142	Haeckel's Biogenetic Law and the Land Plant Phylotypic Stage. <i>BioScience</i> , 2016 , 66, 510-519	5.7	9
141	Isometric scaling of above- and below-ground biomass at the individual and community levels in the understorey of a sub-tropical forest. <i>Annals of Botany</i> , 2015 , 115, 303-13	4.1	14
140	A phyletic perspective on cell growth. <i>Cold Spring Harbor Perspectives in Biology</i> , 2015 , 7,	10.2	12
139	Historical revisionism and the inheritance theories of Darwin and Weismann. <i>Die Naturwissenschaften</i> , 2015 , 102, 27	2	2
138	A Biophysical Perspective on the Pollination Biology of <i>Ephedra nevadensis</i> and <i>E. trifurca</i> . <i>Botanical Review</i> , 2015 , 81, 28-41	3.8	10
137	Kleiber's Law: How the Fire of Life ignited debate, fueled theory, and neglected plants as model organisms. <i>Plant Signaling and Behavior</i> , 2015 , 10, e1036216	2.5	10
136	Adaptive Aspects of Development: A 30-Year Perspective on the Relevance of Biomechanical and Allometric Analyses. <i>Boston Studies in the Philosophy and History of Science</i> , 2015 , 57-76	0.2	
135	Measuring the tempo of plant death and birth. <i>New Phytologist</i> , 2015 , 207, 254-256	9.8	1
134	Rethinking gene regulatory networks in light of alternative splicing, intrinsically disordered protein domains, and post-translational modifications. <i>Frontiers in Cell and Developmental Biology</i> , 2015 , 3, 8	5.7	71

133	A theoretical framework for whole-plant carbon assimilation efficiency based on metabolic scaling theory: a test case using <i>Picea</i> seedlings. <i>Tree Physiology</i> , 2015 , 35, 599-607	4.2	12
132	The evolutionary-developmental origins of multicellularity. <i>American Journal of Botany</i> , 2014 , 101, 6-25	2.7	89
131	Sensitivity of growth and biomass allocation patterns to increasing nitrogen: a comparison between ephemerals and annuals in the Gurbantunggut Desert, north-western China. <i>Annals of Botany</i> , 2014 , 113, 501-11	4.1	23
130	Interspecific differences in whole-plant respiration vs. biomass scaling relationships: a case study using evergreen conifer and angiosperm tree seedlings. <i>American Journal of Botany</i> , 2014 , 101, 617-23	2.7	10
129	Did meiosis evolve before sex and the evolution of eukaryotic life cycles?. <i>BioEssays</i> , 2014 , 36, 1091-101	4.1	17
128	Amphimixis and the individual in evolving populations: does Weismann's Doctrine apply to all, most or a few organisms?. <i>Die Naturwissenschaften</i> , 2014 , 101, 357-72	2	12
127	Assessing Scaling Relationships: Uses, Abuses, and Alternatives. <i>International Journal of Plant Sciences</i> , 2014 , 175, 754-763	2.6	19
126	The number of cell types, information content, and the evolution of complex multicellularity. <i>Acta Societatis Botanicorum Poloniae</i> , 2014 , 83, 337-347	1.5	14
125	Biophysical effects on plant competition and coexistence. <i>Functional Ecology</i> , 2013 , 27, 854-864	5.6	19
124	The evo-devo of multinucleate cells, tissues, and organisms, and an alternative route to multicellularity. <i>Evolution & Development</i> , 2013 , 15, 466-74	2.6	25
123	Biophysical and size-dependent perspectives on plant evolution. <i>Journal of Experimental Botany</i> , 2013 , 64, 4817-27	7	17
122	Metabolic scaling theory in plant biology and the three oxygen paradoxa of aerobic life. <i>Theory in Biosciences</i> , 2013 , 132, 277-88	1.3	6
121	The origins of multicellular organisms. <i>Evolution & Development</i> , 2013 , 15, 41-52	2.6	101
120	Modes of failure in tubular plant organs. <i>American Journal of Botany</i> , 2013 , 100, 332-6	2.7	17
119	Cell division and turgor-driven stem elongation in juvenile plants: a synthesis. <i>Plant Science</i> , 2013 , 207, 45-56	5.3	47
118	Testing the metabolic theory of ecology. <i>Ecology Letters</i> , 2012 , 15, 1465-74	10	124
117	Organ-specific rates of cellular respiration in developing sunflower seedlings and their bearing on metabolic scaling theory. <i>Protoplasma</i> , 2012 , 249, 1049-57	3.4	15
116	Leaf traits and relationships differ with season as well as among species groupings in a managed Southeastern China forest landscape. <i>Plant Ecology</i> , 2012 , 213, 1489-1502	1.7	12

115	Mechanical properties of wood disproportionately increase with increasing density. <i>American Journal of Botany</i> , 2012 , 99, 169-70	2.7	12
114	A macroecological analysis of SERA derived forest heights and implications for forest volume remote sensing. <i>PLoS ONE</i> , 2012 , 7, e33927	3.7	2
113	Plant development, auxin, and the subsystem incompleteness theorem. <i>Frontiers in Plant Science</i> , 2012 , 3, 37	6.2	16
112	Dynamical patterning modules in plant development and evolution. <i>International Journal of Developmental Biology</i> , 2012 , 56, 661-74	1.9	28
111	Biomass allocation to leaves, stems and roots: meta-analyses of interspecific variation and environmental control. <i>New Phytologist</i> , 2012 , 193, 30-50	9.8	1490
110	The effects of domestication on the scaling of below- vs. aboveground biomass in four selected wheat (<i>Triticum</i> ; Poaceae) genotypes. <i>American Journal of Botany</i> , 2012 , 99, 1112-7	2.7	18
109	Computer simulations support a core prediction of a contentious plant model. <i>American Journal of Botany</i> , 2012 , 99, 508-16	2.7	6
108	Insights into plant size-density relationships from models and agricultural crops. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 8600-5	11.5	52
107	Plant Physics 2012 ,		85
106	The evolution and functional significance of leaf shape in the angiosperms. <i>Functional Plant Biology</i> , 2011 , 38, 535-552	2.7	266
105	Climbing plants: attachment and the ascent for light. <i>Current Biology</i> , 2011 , 21, R199-201	6.3	7
104	Important foliar traits depend on species-grouping: analysis of a remnant temperate forest at the Keerqin Sandy Lands, China. <i>Plant and Soil</i> , 2011 , 340, 337-345	4.2	11
103	COMPUTER SIMULATIONS OF PLANT BIODIVERSITY IN STABLE AND UNSTABLE ENVIRONMENTS: A TEST OF THE NEUTRAL BIODIVERSITY THEORY. <i>Journal of Biological Systems</i> , 2011 , 19, 1-17	1.6	11
102	Patterns of diversity in leaves from canopies of <i>Ginkgo biloba</i> are revealed using Specific Leaf Area as a morphological character. <i>American Journal of Botany</i> , 2011 , 98, 1068-76	2.7	9
101	Differences in the scaling of area and mass of <i>Ginkgo biloba</i> (Ginkgoaceae) leaves and their relevance to the study of specific leaf area. <i>American Journal of Botany</i> , 2011 , 98, 1381-6	2.7	17
100	Modeling Forest Self-assembly Dynamics Using Allometric and Physical First Principles. <i>BioScience</i> , 2011 , 61, 663-676	5.7	3
99	The evolution of the land plant life cycle. <i>New Phytologist</i> , 2010 , 185, 27-41	9.8	118
98	The metabolic theory of ecology: prospects and challenges for plant biology. <i>New Phytologist</i> , 2010 , 188, 696-710	9.8	72

97	Ontogenetic shift in the scaling of dark respiration with whole-plant mass in seven shrub species. <i>Functional Ecology</i> , 2010 , 24, 502-512	5.6	32
96	Evidence of a general 2/3-power law of scaling leaf nitrogen to phosphorus among major plant groups and biomes. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2010 , 277, 877-83	4.4	131
95	Ontogenetic changes in the numbers of short- vs. long-shoots account for decreasing specific leaf area in <i>Acer rubrum</i> (Aceraceae) as trees increase in size. <i>American Journal of Botany</i> , 2010 , 97, 27-37	2.7	13
94	Worldwide correlations of mechanical properties and green wood density. <i>American Journal of Botany</i> , 2010 , 97, 1587-94	2.7	95
93	Size-dependent leaf area ratio in plant twigs: implication for leaf size optimization. <i>Annals of Botany</i> , 2010 , 105, 71-7	4.1	22
92	Predicting the allometry of leaf surface area and dry mass. <i>American Journal of Botany</i> , 2009 , 96, 531-6	2.7	33
91	Emergent properties of plants competing in silico for space and light: Seeing the tree from the forest. <i>American Journal of Botany</i> , 2009 , 96, 1430-44	2.7	13
90	Functional adaptation and phenotypic plasticity at the cellular and whole plant level. <i>Journal of Biosciences</i> , 2009 , 34, 613-20	2.3	24
89	Evolutionary plant physiology: Charles Darwin's forgotten synthesis. <i>Die Naturwissenschaften</i> , 2009 , 96, 1339-54	2	36
88	The effect of twig architecture and seed number on seed size variation in subtropical woody species. <i>New Phytologist</i> , 2009 , 183, 1212-1221	9.8	19
87	Darwin's second 'abominable mystery': Why are there so many angiosperm species?. <i>American Journal of Botany</i> , 2009 , 96, 366-81	2.7	122
86	The evolutionary development of plant body plans. <i>Functional Plant Biology</i> , 2009 , 36, 682-695	2.7	55
85	Carbon/nitrogen/phosphorus allometric relations across species. <i>Plant Ecophysiology</i> , 2008 , 9-30		6
84	Evidence for "diminishing returns" from the scaling of stem diameter and specific leaf area. <i>American Journal of Botany</i> , 2008 , 95, 549-57	2.7	33
83	Genetic effects on the biomass partitioning and growth of <i>Pisum</i> and <i>Lycopersicon</i> . <i>American Journal of Botany</i> , 2008 , 95, 424-33	2.7	1
82	Macroevolution via secondary endosymbiosis: a Neo-Goldschmidtian view of unicellular hopeful monsters and Darwin's primordial intermediate form. <i>Theory in Biosciences</i> , 2008 , 127, 277-89	1.3	28
81	Above- and below-ground biomass relationships across 1534 forested communities. <i>Annals of Botany</i> , 2007 , 99, 95-102	4.1	79
80	Biological scaling: does the exception prove the rule?. <i>Nature</i> , 2007 , 445, E9-10; discussion E10-1	50.4	103

79	Carica papaya (Caricaceae): a case study into the effects of domestication on plant vegetative growth and reproduction. <i>American Journal of Botany</i> , 2007 , 94, 999-1002	2.7	18
78	Sizing up life and death. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 15589-90	11.5	3
77	A reevaluation of the key factors that influence tomato fruit softening and integrity. <i>Plant Physiology</i> , 2007 , 144, 1012-28	6.6	274
76	Maximum plant height and the biophysical factors that limit it. <i>Tree Physiology</i> , 2007 , 27, 433-40	4.2	72
75	Metabolic Scaling and the Evolutionary Dynamics of Plant Size, Form, and Diversity: Toward a Synthesis of Ecology, Evolution, and Paleontology. <i>International Journal of Plant Sciences</i> , 2007 , 168, 729-749	2.6	33
74	"Diminishing returns" in the scaling of functional leaf traits across and within species groups. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 8891-6	11.5	143
73	Plant biomechanics: an overview and prospectus. <i>American Journal of Botany</i> , 2006 , 93, 1369-78	2.7	36
72	A comparison between the record height-to-stem diameter allometries of Pachycaulis and Leptocaulis species. <i>Annals of Botany</i> , 2006 , 97, 79-83	4.1	42
71	Thinking Outside the HOX. <i>Biological Theory</i> , 2006 , 1, 128-129	1.7	2
70	Allometric theory and the mechanical stability of large trees: proof and conjecture. <i>American Journal of Botany</i> , 2006 , 93, 824-8	2.7	29
69	Plant allometry, leaf nitrogen and phosphorus stoichiometry, and interspecific trends in annual growth rates. <i>Annals of Botany</i> , 2006 , 97, 155-63	4.1	122
68	Biomass partitioning and leaf N,P - stoichiometry: comparisons between tree and herbaceous current-year shoots. <i>Plant, Cell and Environment</i> , 2006 , 29, 2030-42	8.4	47
67	A phyletic perspective on the allometry of plant biomass-partitioning patterns and functionally equivalent organ-categories. <i>New Phytologist</i> , 2006 , 171, 27-40	9.8	82
66	Modelling below- and above-ground biomass for non-woody and woody plants. <i>Annals of Botany</i> , 2005 , 95, 315-21	4.1	97
65	N, P, and C stoichiometry of Eranthis hyemalis (Ranunculaceae) and the allometry of plant growth. <i>American Journal of Botany</i> , 2005 , 92, 1256-63	2.7	61
64	Nitrogen/phosphorus leaf stoichiometry and the scaling of plant growth. <i>Ecology Letters</i> , 2005 , 8, 636-642		179
63	Growth and hydraulic (not mechanical) constraints govern the scaling of tree height and mass. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 15661-3	11.5	173
62	The Cell Walls that Bind the Tree of Life. <i>BioScience</i> , 2004 , 54, 831	5.7	62

61	The modern theory of biological evolution: an expanded synthesis. <i>Die Naturwissenschaften</i> , 2004 , 91, 255-76	2	148
60	Plant allometry: is there a grand unifying theory?. <i>Biological Reviews</i> , 2004 , 79, 871-89	13.5	218
59	Biomechanics and anatomy of <i>Lycopersicon esculentum</i> fruit peels and enzyme-treated samples. <i>American Journal of Botany</i> , 2004 , 91, 352-60	2.7	63
58	COMPUTER MODELS OF EARLY LAND PLANT EVOLUTION. <i>Annual Review of Earth and Planetary Sciences</i> , 2004 , 32, 47-66	15.3	48
57	On the mechanical properties of the rare endemic cactus <i>Stenocereus eruca</i> and the related species <i>S. gummosus</i> . <i>American Journal of Botany</i> , 2003 , 90, 663-74	2.7	15
56	Tree size frequency distributions, plant density, age and community disturbance. <i>Ecology Letters</i> , 2003 , 6, 405-411	10	101
55	Size-dependent species richness: trends within plant communities and across latitude. <i>Ecology Letters</i> , 2003 , 6, 631-636	10	32
54	Thermodynamic and metabolic effects on the scaling of production and population energy use. <i>Ecology Letters</i> , 2003 , 6, 990-995	10	193
53	On the economy and safety of hollow non-septate peduncles. <i>American Journal of Botany</i> , 2003 , 90, 356-63	4	4
52	Reexamination of a canonical model for plant organ biomass partitioning. <i>American Journal of Botany</i> , 2003 , 90, 250-4	2.7	12
51	The Bio-Logic and machinery of plant morphogenesis. <i>American Journal of Botany</i> , 2003 , 90, 515-25	2.7	20
50	On the allometry of biomass partitioning and light harvesting for plants with leafless stems. <i>Journal of Theoretical Biology</i> , 2002 , 217, 47-52	2.3	9
49	Global allocation rules for patterns of biomass partitioning in seed plants. <i>Science</i> , 2002 , 295, 1517-20	33.3	496
48	The biomechanics of <i>Pachycereus pringlei</i> root systems. <i>American Journal of Botany</i> , 2002 , 89, 12-21	2.7	28
47	Canonical rules for plant organ biomass partitioning and annual allocation. <i>American Journal of Botany</i> , 2002 , 89, 812-9	2.7	110
46	On the vegetative biomass partitioning of seed plant leaves, stems, and roots. <i>American Naturalist</i> , 2002 , 159, 482-97	3.7	153
45	Invariant scaling relations across tree-dominated communities. <i>Nature</i> , 2001 , 410, 655-60	50.4	490
44	Evolutionary trends in safety factors against wind-induced stem failure. <i>American Journal of Botany</i> , 2001 , 88, 1266-1278	2.7	33

43	Taxing debate for taxonomists. <i>Science</i> , 2001 , 292, 2249-50	33.3	6
42	Modeling fossil plant form-function relationships: A critique. <i>Paleobiology</i> , 2000 , 26, 289-304	2.6	1
41	Computing factors of safety against wind-induced tree stem damage. <i>Journal of Experimental Botany</i> , 2000 , 51, 797-806	7	36
40	Modeling fossil plant form-function relationships: a critique. <i>Paleobiology</i> , 2000 , 26, 289-304	2.6	7
39	A mechanical perspective on foliage leaf form and function. <i>New Phytologist</i> , 1999 , 143, 19-31	9.8	207
38	The influence of gravity and wind on land plant evolution. <i>Review of Palaeobotany and Palynology</i> , 1998 , 102, 1-14	1.7	46
37	Preferential states of longitudinal tension in the outer tissues of <i>Taraxacum Officinale</i> (Asteraceae) peduncles. <i>American Journal of Botany</i> , 1998 , 85, 1068-1081	2.7	19
36	The role of the epidermis as a stiffening agent in <i>Tulipa</i> (Liliaceae) stems. <i>American Journal of Botany</i> , 1997 , 84, 735-744	2.7	41
35	Size-dependent variations in plant growth rates and the $\frac{3}{4}$ -power rule. <i>American Journal of Botany</i> , 1994 , 81, 134-144	2.7	16
34	Comparisons among biomass allocation and spatial distribution patterns of some vine, pteridophyte, and gymnosperm shoots. <i>American Journal of Botany</i> , 1994 , 81, 1416-1421	2.7	8
33	Comparisons among biomass allocation and spatial distribution patterns of some vine, pteridophyte, and gymnosperm shoots 1994 , 81, 1416		15
32	The allometry of saguaro height 1994 , 81, 1161		23
31	Size-dependent variations in plant growth rates and the $\frac{3}{4}$ -power rule. 1994 , 81, 134		25
30	Voigt and Reuss Models for Predicting Changes in Young's Modulus of Dehydrating Plant Organs. <i>Annals of Botany</i> , 1992 , 70, 347-355	4.1	13
29	Petiole mechanics, light interception by Lamina, and "Economy in Design". <i>Oecologia</i> , 1992 , 90, 518-526	2.9	38
28	FLEXURAL STIFFNESS ALLOMETRIES OF ANGIOSPERM AND FERN PETIOLES AND RACHISES: EVIDENCE FOR BIOMECHANICAL CONVERGENCE. <i>Evolution; International Journal of Organic Evolution</i> , 1991 , 45, 734-750	3.8	21
27	THE ELASTIC MODULI AND MECHANICS OF <i>POPULUS TREMULOIDES</i> (SALICACEAE) PETIOLES IN BENDING AND TORSION. <i>American Journal of Botany</i> , 1991 , 78, 989-996	2.7	46
26	EFFECTS OF TISSUE VOLUME AND LOCATION ON THE MECHANICAL CONSEQUENCES OF DEHYDRATION OF PETIOLES. <i>American Journal of Botany</i> , 1991 , 78, 361-369	2.7	6

25	THE ELASTIC MODULI AND MECHANICS OF POPULUS TREMULOIDES (SALICACEAE) PETIOLES IN BENDING AND TORSION 1991 , 78, 989		14
24	BIOMECHANICS OF PSILOTUM NUDUM AND SOME EARLY PALEOZOIC VASCULAR SPOROPHYTES. <i>American Journal of Botany</i> , 1990 , 77, 590-606	2.7	25
23	A REEVALUATION OF THE ZOSTEROPHYLLOPHYTINA WITH COMMENTS ON THE ORIGIN OF LYCOPODS. <i>American Journal of Botany</i> , 1990 , 77, 274-283	2.7	28
22	A REEVALUATION OF THE ZOSTEROPHYLLOPHYTINA WITH COMMENTS ON THE ORIGIN OF LYCOPODS 1990 , 77, 274		26
21	BIOMECHANICS OF PSILOTUM NUDUM AND SOME EARLY PALEOZOIC VASCULAR SPOROPHYTES 1990 , 77, 590		11
20	PHYSIOLOGICAL AND MORPHOLOGICAL MODIFICATIONS OF PLANTAGO MAJOR (PLANTAGINACEAE) IN RESPONSE TO LIGHT CONDITIONS 1989 , 76, 370		9
19	A morphometric analysis of the phloem-unloading pathway in developing tobacco leaves. <i>Planta</i> , 1988 , 176, 307-18	4.7	75
18	The Role of Phyllotatic Pattern as a "Developmental Constraint" On the Interception of Light by Leaf Surfaces. <i>Evolution; International Journal of Organic Evolution</i> , 1988 , 42, 1	3.8	41
17	THE ROLE OF PHYLLOTACTIC PATTERN AS A "DEVELOPMENTAL CONSTRAINT" ON THE INTERCEPTION OF LIGHT BY LEAF SURFACES. <i>Evolution; International Journal of Organic Evolution</i> , 1988 , 42, 1-16	3.8	52
16	The Aerodynamics of Pollen Capture in Two Sympatric Ephedra Species. <i>Evolution; International Journal of Organic Evolution</i> , 1987 , 41, 104	3.8	9
15	Aerodynamics of Ephedra trifurca. <i>Journal of Mathematical Biology</i> , 1986 , 24, 1-24	2	12
14	AERODYNAMICS OF EPHEDRA TRIFURCA: I. POLLEN GRAIN VELOCITY FIELDS AROUND STEMS BEARING OVULES 1986 , 73, 966		11
13	The aerodynamics of wind pollination. <i>Botanical Review, The</i> , 1985 , 51, 328-386	3.8	222
12	Patterns in vascular land plant diversification. <i>Nature</i> , 1983 , 303, 614-616	50.4	210
11	Apparent Changes in the Diversity of Fossil Plants 1980 , 1-89		27
10	AN ASSESSMENT OF CHEMICAL FEATURES FOR THE CLASSIFICATION OF PLANT FOSSILS. <i>Taxon</i> , 1979 , 28, 505-516	0.8	6
9	Chemotaxonomy of Some Paleozoic Vascular Plants. Part I: Chemical Compositions and Preliminary Cluster Analyses. <i>Brittonia</i> , 1976 , 28, 353	0.5	18
8	Deducing plant function from organic form: challenges and pitfalls 47-82		4

7	Embryo morphology and seedling evolution103-129		4
6	A whole-plant economics spectrum including bark functional traits for 59 subtropical woody plant species. <i>Journal of Ecology</i> ,	6	2
5	Variation in plant carbon, nitrogen and phosphorus contents across the drylands of China. <i>Functional Ecology</i> ,	5.6	3
4	Evolutionary walks through a land plant morphospace		9
3	An elliptical blade is not a true ellipse, but a superellipseEvidence from two <i>Michelia</i> species. <i>Journal of Forestry Research</i> ,1	2	3
2	Revisiting Julius Sachs's Physiological Notes: II. Contributions to the Theory of the Cell. a) Energids and Cells(1892). <i>Biological Theory</i> ,1	1.7	
1	Comparison of a universal (but complex) model for avian egg shape with a simpler model. <i>Annals of the New York Academy of Sciences</i> ,	6.5	0