Franz W Badeck

List of Publications by Year
in descending order

92 papers	7,478 citations	66343 42 h-index	54911 84 g-index
95 all docs	95 docs citations	95 times ranked	9523 citing authors

#	Article	IF	Citations
1	Drought tolerance improvement in crop plants: An integrated view from breeding to genomics. Field Crops Research, 2008, 105, 1-14.	5.1	1,122
2	Responses of spring phenology to climate change. New Phytologist, 2004, 162, 295-309.	7.3	761
3	Effects of elevated [CO2] on photosynthesis in European forest species: a meta-analysis of model parameters. Plant, Cell and Environment, 1999, 22, 1475-1495.	5.7	415
4	Post-photosynthetic fractionation of stable carbon isotopes between plant organsâ€"a widespread phenomenon. Rapid Communications in Mass Spectrometry, 2005, 19, 1381-1391.	1.5	390
5	Carbon allocation and carbon isotope fluxes in the plant-soil-atmosphere continuum: a review. Biogeosciences, 2011, 8, 3457-3489.	3.3	289
6	Metabolic Origin of Carbon Isotope Composition of Leaf Dark-Respired CO2 in French Bean. Plant Physiology, 2003, 131, 237-244.	4.8	248
7	Carbon isotope fractionation during dark respiration and photorespiration in C3 plants. Phytochemistry Reviews, 2003, 2, 145-161.	6.5	217
8	Carbon 13 exchanges between the atmosphere and biosphere. Global Biogeochemical Cycles, 1997, 11, 507-533.	4.9	206
9	Î´13C of CO2respired in the dark in relation to Î´13C of leaf metabolites: comparison betweenNicotiana sylvestrisandHelianthus annuusunder drought. Plant, Cell and Environment, 2001, 24, 505-515.	5.7	181
10	Î´13C of CO2respired in the dark in relation toÎ´13C of leaf carbohydrates inPhaseolus vulgarisL. under progressive drought. Plant, Cell and Environment, 1999, 22, 515-523.	5.7	172
11	Physiology-based phenology models for forest tree species in Germany. International Journal of Biometeorology, 2003, 47, 193-201.	3.0	166
12	Climate and land use change impacts on plant distributions in Germany. Biology Letters, 2008, 4, 564-567.	2.3	138
13	Progress and challenges in using stable isotopes to trace plant carbon and water relations across scales. Biogeosciences, 2012, 9, 3083-3111.	3.3	138
14	Theoretical considerations about carbon isotope distribution in glucose of C3 plants. Functional Plant Biology, 2004, 31, 857.	2.1	135
15	Use of a Water Stress Index to Identify Barley Genotypes Adapted to Rainfed and Irrigated Conditions. Crop Science, 2004, 44, 2127-2137.	1.8	125
16	Interannual variation of carbon exchange fluxes in terrestrial ecosystems. Global Biogeochemical Cycles, 1996, 10, 737-755.	4.9	120
17	European winegrowersâ€™ perceptions of climate change impact and options for adaptation. Regional Environmental Change, 2009, 9, 61-73.	2.9	120
18	Model-based analysis of management alternatives at stand and regional level in Brandenburg (Germany). Forest Ecology and Management, 2005, 207, 59-74.	3.2	110

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19	Metabolomic responses triggered by arbuscular mycorrhiza enhance tolerance to water stress in wheat cultivars. Plant Physiology and Biochemistry, 2019, 137, 203-212.	5.8	102
20	Harden the chloroplast to protect the plant. Physiologia Plantarum, 2013, 147, 55-63.	5.2	99
21	The Frankfurt Biosphere Model: a global process-oriented model of seasonal and long-term CO2 exchange between terrestrial ecosystems and the atmosphere. I. Model description and illustrative results for cold deciduous and boreal forests. Climate Research, 1994, 4, 143-166.	1.1	91
22	Divergence in Î´¹³C of dark respired CO₂ and bulk organic matter occurs during the transition between heterotrophy and autotrophy in Phaseolus vulgaris plants. New Phytologist, 2008, 177, 406-418.	7.3	89
23	Multiple-use forest management in consideration of climate change and the interests of stakeholder groups. European Journal of Forest Research, 2007, 126, 225-239.	2.5	80
24	Opposite carbon isotope discrimination during dark respiration in leaves versus roots â€“ a review. New Phytologist, 2014, 201, 751-769.	7.3	80
25	Proteomic insight into the mitigation of wheat root drought stress by arbuscular mycorrhizae. Journal of Proteomics, 2017, 169, 21-32.	2.4	75
26	Determinants of barley grain yield in a wide range of Mediterranean environments. Field Crops Research, 2011, 120, 169-178.	5.1	73
27	Estimating decomposition rate constants for European tree species from literature sources. European Journal of Forest Research, 2008, 127, 301-313.	2.5	71
28	Title is missing!. Climatic Change, 2001, 51, 307-347.	3.6	67
29	Narrowing uncertainties in the effects of elevated CO2 on crops. Nature Food, 2020, 1, 775-782.	14.0	67
30	Comparing solar radiation interception and use efficiency for the energy crops giant reed (Arundo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	5.1	64
31	Estimation of the extinction risk for high-montane species as a consequence of global warming and assessment of their suitability as cross-taxon indicators. Ecological Indicators, 2010, 10, 341-352.	6.3	61
32	Evaluation of methods for the combination of phenological time series and outlier detection. Tree Physiology, 2002, 22, 973-982.	3.1	59
33	Sensitivity of Portuguese forest fires to climatic, human, and landscape variables: subnational differences between fire drivers in extreme fire years and decadal averages. Regional Environmental Change, 2011, 11, 543-551.	2.9	59
34	On the ¹³C/¹²C isotopic signal of day and night respiration at the mesocosm level. Plant, Cell and Environment, 2010, 33, 900-913.	5.7	56
35	Constitutive differences in water use efficiency between two durum wheat cultivars. Field Crops Research, 2012, 125, 49-60.	5.1	56
36	Stomatal and non-stomatal limitations are responsible in down-regulation of photosynthesis in melon plants grown under the saline condition: Application of carbon isotope discrimination as a reliable proxy. Plant Physiology and Biochemistry, 2019, 141, 1-19.	5.8	55

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37	Plant phenology in Germany over the 20th century. Regional Environmental Change, 2005, 5, 37-46.	2.9	54
38	Occurrence of Fusarium langsethiae and T-2 and HT-2 Toxins in Italian Malting Barley. Toxins, 2016, 8, 247.	3.4	50
39	Aboveground Growth and Competition in Forest Gap Models: An Analysis for Studies of Climatic Change. Climatic Change, 2001, 51, 415-447.	3.6	48
40	Influence of heterogeneous landscapes on computed green-up dates based on daily AVHRR NDVI observations. Remote Sensing of Environment, 2009, 113, 2618-2632.	11.0	48
41	Population structure and genome-wide association analysis for frost tolerance in oat using continuous SNP array signal intensity ratios. Theoretical and Applied Genetics, 2016, 129, 1711-1724.	3.6	48
42	Hydrological impact assessment of afforestation and change in tree-species composition â€“ A regional case study for the Federal State of Brandenburg (Germany). Journal of Hydrology, 2007, 346, 1-17.	5.4	43
43	Diversity in the Response to Low Temperature in Representative Barley Genotypes Cultivated in Europe. Crop Science, 2011, 51, 2759-2779.	1.8	42
44	UAV-based high-throughput phenotyping to discriminate barley vigour with visible and near-infrared vegetation indices. International Journal of Remote Sensing, 2018, 39, 5330-5344.	2.9	42
45	Estimating Canopy Light Interception and Absorption Using Leaf Mass Per Unit Leaf Area in Solanum melongena. Annals of Botany, 2001, 88, 101-109.	2.9	39
46	Does conversion of even-aged, secondary coniferous forests affect carbon sequestration? A simulation study under changing environmental conditions. Silva Fennica, 2008, 42, .	1.3	38
47	Modelling leaf mass per area in forest canopy as affected by prevailing radiation conditions. Ecological Modelling, 2008, 211, 339-349.	2.5	36
48	A simplified approach to implement forest eco-hydrological properties in regional hydrological modelling. Ecological Modelling, 2005, 187, 40-59.	2.5	34
49	Relationships between leaf conductance to CO2 diffusion and photosynthesis in micropropagated grapevine plants, before and after ex vitro acclimatization. Journal of Experimental Botany, 2006, 57, 2687-2695.	4.8	34
50	Unambiguous evidence of old soil carbon in grass biosilica particles. Biogeosciences, 2016, 13, 1269-1286.	3.3	33
51	Changes in yield components, morphological, physiological and fruit quality traits in processing tomato cultivated in Italy since the 1930â€™s. Scientia Horticulturae, 2019, 257, 108726.	3.6	32
52	Leaf photosynthetic characteristics of beech (Fagus sylvatica) saplings during three years of exposure to elevated CO2 concentration. Tree Physiology, 2000, 20, 239-247.	3.1	31
53	Carbon sequestration and forest management.. CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources, 0, , .	1.0	31
54	Genetic variation in eggplant for Nitrogen Use Efficiency under contrasting NO₃^{â€‹} supply. Journal of Integrative Plant Biology, 2020, 62, 487-508.	8.5	28

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55	Elevated CO2 has concurrent effects on leaf and grain metabolism but minimal effects on yield in wheat. Journal of Experimental Botany, 2020, 71, 5990-6003.	4.8	27
56	Physiological responses to chilling in cultivars of processing tomato released and cultivated over the past decades in Southern Europe. Scientia Horticulturae, 2018, 231, 118-125.	3.6	26
57	Association between the allele compositions of major plant developmental genes and frost tolerance in barley (Hordeum vulgare L.) germplasm of different origin. Molecular Breeding, 2016, 36, 1.	2.1	24
58	Structure of a global and seasonal carbon exchange model for the terrestrial biosphere the frankfurt biosphere model (FBM). Water, Air, and Soil Pollution, 1993, 70, 675-684.	2.4	23
59	Investigating habitat-specific plant species pools under climate change. Basic and Applied Ecology, 2010, 11, 603-611.	2.7	23
60	Elevated field atmospheric CO2 concentrations affect the characteristics of winter wheat (cv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542	1.5	20
61	Determinants of barley grain yield in drought-prone Mediterranean environments. Italian Journal of Agronomy, 2013, 8, 1.	1.0	17
62	Elevated CO₂ Impact on Common Wheat (Triticum aestivum L.) Yield, Wholemeal Quality, and Sanitary Risk. Journal of Agricultural and Food Chemistry, 2020, 68, 10574-10585.	5.2	16
63	CO2 Diffusion Inside Leaf Mesophyll of Ligneous Plants. , 1998, , 3961-3966.		16
64	Consistent patterns in leaf lamina and leaf vein carbon isotope composition across ten herbs and tree species. Rapid Communications in Mass Spectrometry, 2009, 23, 2455-2460.	1.5	15
65	Modelling ventilation efficiency of teleost fish gills for pollutants with high affinity to plasma proteins. Ecological Modelling, 1991, 57, 237-262.	2.5	14
66	The plant phenological online database (PPODB): an online database for long-term phenological data. International Journal of Biometeorology, 2013, 57, 805-812.	3.0	14
67	13C-labelling of leaf photoassimilates to study the sourceâ€“sink relationship in two Iranian melon cultivars. Scientia Horticulturae, 2013, 151, 157-164.	3.6	14
68	A Combined Field/Laboratory Method for Assessment of Frost Tolerance with Freezing Tests and Chlorophyll Fluorescence. Agronomy, 2015, 5, 71-88.	3.0	14
69	Effects of the age class distributions of the temperate and boreal forests on the global CO2 source-sink function. Tellus, Series B: Chemical and Physical Meteorology, 1995, 47, 212-231.	1.6	13
70	Simulation of forest tree speciesâ€™ bud burst dates for different climate scenarios: chilling requirements and photo-period may limit bud burst advancement. International Journal of Biometeorology, 2016, 60, 1711-1726.	3.0	13
71	Interaction of Tomato Genotypes and Arbuscular Mycorrhizal Fungi under Reduced Irrigation. Horticulturae, 2019, 5, 79.	2.8	13
72	Responses in NPP and carbon stores of the northern biomes to a CO2-induced climatic change, as evaluated by the Frankfurt biosphere model (FBM). Tellus, Series B: Chemical and Physical Meteorology, 1995, 47, 191-205.	1.6	12

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73	Description and evaluation of the process-based forest model 4C v2.2 at four European forest sites. Geoscientific Model Development, 2020, 13, 5311-5343.	3.6	12
74	Carbon Isotope Fractionation in Plant Respiration. Advances in Photosynthesis and Respiration, 2017, , 43-68.	1.0	11
75	Increasing atmospheric CO 2 modifies durum wheat grain quality and pasta cooking quality. Journal of Cereal Science, 2016, 69, 245-251.	3.7	10
76	Changes inÎ´¹³C of dark respired CO₂and organic matter of different organs during early ontogeny in peanut plants. Isotopes in Environmental and Health Studies, 2015, 51, 93-108.	1.0	9
77	Extensive allele mining discovers novel genetic diversity in the loci controlling frost tolerance in barley. Theoretical and Applied Genetics, 2021, , 1.	3.6	9
78	Application of water-saving treatments reveals different adaptation strategies in three Iranian melon genotypes. Scientia Horticulturae, 2019, 256, 108518.	3.6	8
79	Changes and their possible causes in Î´¹³C of dark-respired CO₂and its putative bulk and soluble sources during maize ontogeny. Journal of Experimental Botany, 2016, 67, 2603-2615.	4.8	7
80	Combining Messy Phenological Time Series. , 2010, , 147-158.		7
81	Characterization of Celiac Disease-Related Epitopes and Gluten Fractions, and Identification of Associated Loci in Durum Wheat. Agronomy, 2020, 10, 1231.	3.0	6
82	Sweet Chestnut and Beech Saplings under Elevated CO2. Forestry Sciences, 1997, , 15-25.	0.4	5
83	Nitrate and ammonium differ in their impact on Î´¹³C of plant metabolites and respired CO₂from tobacco leaves. Isotopes in Environmental and Health Studies, 2021, 57, 11-34.	1.0	4
84	Intraspecific variability of carbon isotope discrimination and its correlation with grain yield in safflower: prospects for selection in a Mediterranean climate. Isotopes in Environmental and Health Studies, 2016, 52, 577-591.	1.0	3
85	Agrobiodiversity for Adaptive and Yield Traits in Romanian and Italian Barley Cultivars across Four Continental Environments. Agronomy, 2018, 8, 79.	3.0	2
86	Using ecological and life-history characteristics for projecting species' responses to climate change. Frontiers of Biogeography, 2014, 6, .	1.8	1
87	On the Significance of Internal Resistance in Tree Leaves for Gas Exchange under Elevated CO2. Forestry Sciences, 1997, , 35-39.	0.4	1
88	Using ecological and life-history characteristics for projecting species' responses to climate change. Frontiers of Biogeography, 2014, 6, .	1.8	1
89	Preface. Isotopes in Environmental and Health Studies, 2009, 45, 273-274.	1.0	0
90	Foreword. Rapid Communications in Mass Spectrometry, 2009, 23, 2389-2389.	1.5	0

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91	Relationship between taproot morphological traits, carbon isotope composition and grain yield in safflower. Arid Land Research and Management, 2018, 32, 471-486.	1.6	0
92	The Effect of Dehydration on Leaf Photosynthesis Depends on Leaf Temperatures. , 1998, , 2545-2548.		0