

Ansgar Kahmen

List of Publications by Year in descending order

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95
papers

6,956
citations

76326

40
h-index

62596

80
g-index

96
all docs

96
docs citations

96
times ranked

7863
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular Paleohydrology: Interpreting the Hydrogen-Isotopic Composition of Lipid Biomarkers from Photosynthesizing Organisms. <i>Annual Review of Earth and Planetary Sciences</i> , 2012, 40, 221-249.	11.0	748
2	Global patterns of foliar nitrogen isotopes and their relationships with climate, mycorrhizal fungi, foliar nutrient concentrations, and nitrogen availability. <i>New Phytologist</i> , 2009, 183, 980-992.	7.3	744
3	A first assessment of the impact of the extreme 2018 summer drought on Central European forests. <i>Basic and Applied Ecology</i> , 2020, 45, 86-103.	2.7	482
4	Stable isotopes in leaf water of terrestrial plants. <i>Plant, Cell and Environment</i> , 2016, 39, 1087-1102.	5.7	256
5	Resource Heterogeneity Moderates the Biodiversity-Function Relationship in Real World Ecosystems. <i>PLoS Biology</i> , 2008, 6, e122.	5.6	210
6	NICHE COMPLEMENTARITY FOR NITROGEN: AN EXPLANATION FOR THE BIODIVERSITY AND ECOSYSTEM FUNCTIONING RELATIONSHIP?. <i>Ecology</i> , 2006, 87, 1244-1255.	3.2	202
7	Leaf water deuterium enrichment shapes leaf wax n-alkane $\delta^2\text{D}$ values of angiosperm plants I: Experimental evidence and mechanistic insights. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 111, 39-49.	3.9	194
8	Leaf water deuterium enrichment shapes leaf wax n-alkane $\delta^2\text{D}$ values of angiosperm plants II: Observational evidence and global implications. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 111, 50-63.	3.9	188
9	Mechanisms of woody-plant mortality under rising drought, CO ₂ and vapour pressure deficit. <i>Nature Reviews Earth & Environment</i> , 2022, 3, 294-308.	29.7	163
10	Foliar $\delta^{15}\text{N}$ values characterize soil N cycling and reflect nitrate or ammonium preference of plants along a temperate grassland gradient. <i>Oecologia</i> , 2008, 156, 861-870.	2.0	159
11	Drivers and dynamics of a massive adaptive radiation in cichlid fishes. <i>Nature</i> , 2021, 589, 76-81.	27.8	151
12	Cellulose $\delta^{18}\text{O}$ is an index of leaf-to-air vapor pressure difference (VPD) in tropical plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 1981-1986.	7.1	148
13	Hydrogen isotope ratios of lacustrine sedimentary n-alkanes as proxies of tropical African hydrology: Insights from a calibration transect across Cameroon. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 79, 106-126.	3.9	137
14	Significant seasonal variation in the hydrogen isotopic composition of leaf-wax lipids for two deciduous tree ecosystems (<i>Fagus sylvatica</i> and <i>Acer pseudoplatanus</i>). <i>Organic Geochemistry</i> , 2009, 40, 732-742.	1.8	131
15	Employing stable isotopes to determine the residence times of soil water and the temporal origin of water taken up by <i>Fagus sylvatica</i> and <i>Picea abies</i> in a temperate forest. <i>New Phytologist</i> , 2018, 219, 1300-1313.	7.3	115
16	Effects of environmental parameters, leaf physiological properties and leaf water relations on leaf water $\delta^{18}\text{O}$ enrichment in different <i>Eucalyptus</i> species. <i>Plant, Cell and Environment</i> , 2008, 31, 738-751.	5.7	107
17	Leaf wax n-alkane $\delta^2\text{D}$ values of field-grown barley reflect leaf water $\delta^2\text{D}$ values at the time of leaf formation. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 6741-6750.	3.9	107
18	Abundance and distribution of leaf wax n-alkanes in leaves of <i>Acacia</i> and <i>Eucalyptus</i> trees along a strong humidity gradient in northern Australia. <i>Organic Geochemistry</i> , 2013, 62, 62-67.	1.8	106

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19	Effects of plant diversity, community composition and environmental parameters on productivity in montane European grasslands. <i>Oecologia</i> , 2005, 142, 606-615.	2.0	100
20	Effects of plant diversity, plant productivity and habitat parameters on arthropod abundance in montane European grasslands. <i>Ecography</i> , 2005, 28, 429-442.	4.5	98
21	Species-specific differences in water uptake depth of mature temperate trees vary with water availability in the soil. <i>Plant Biology</i> , 2019, 21, 71-81.	3.8	95
22	Leaf wax $\delta^{13}C$ values are determined early in the ontogeny of <i>Populus trichocarpa</i> leaves when grown under controlled environmental conditions. <i>Plant, Cell and Environment</i> , 2011, 34, 1639-1651.	5.7	93
23	Quantification of uncertainties in conifer sap flow measured with the thermal dissipation method. <i>New Phytologist</i> , 2018, 219, 1283-1299.	7.3	81
24	Rapid hydraulic collapse as cause of drought-induced mortality in conifers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	80
25	$\delta^{13}C$ fractionations during the biosynthesis of carbohydrates and lipids imprint a metabolic signal on the δ^2H values of plant organic compounds. <i>New Phytologist</i> , 2018, 218, 479-491.	7.3	78
26	Species composition of arbuscular mycorrhizal fungi in two mountain meadows with differing management types and levels of plant biodiversity. <i>Biology and Fertility of Soils</i> , 2006, 42, 286-298.	4.3	72
27	Invertebrate herbivory along a gradient of plant species diversity in extensively managed grasslands. <i>Oecologia</i> , 2006, 150, 233-246.	2.0	71
28	No shift to a deeper water uptake depth in response to summer drought of two lowland and sub-alpine C3-grasslands in Switzerland. <i>Oecologia</i> , 2015, 177, 97-111.	2.0	71
29	n-Alkane biosynthetic hydrogen isotope fractionation is not constant throughout the growing season in the riparian tree <i>Salix viminalis</i> . <i>Geochimica Et Cosmochimica Acta</i> , 2015, 165, 75-85.	3.9	68
30	Impact of invertebrate herbivory in grasslands depends on plant species diversity. <i>Ecology</i> , 2010, 91, 1639-1650.	3.2	67
31	Temperate tree species show identical response in tree water deficit but different sensitivities in sap flow to summer soil drying. <i>Tree Physiology</i> , 2016, 36, 1508-1519.	3.1	62
32	Number of growth days and not length of the growth period determines radial stem growth of temperate trees. <i>Ecology Letters</i> , 2022, 25, 427-439.	6.4	58
33	Daily stem diameter variations can predict the canopy water status of mature temperate trees. <i>Tree Physiology</i> , 2018, 38, 941-952.	3.1	56
34	Oxygen isotope fractionations across individual leaf carbohydrates in grass and tree species. <i>Plant, Cell and Environment</i> , 2017, 40, 1658-1670.	5.7	54
35	Rhizosphere activity in an old-growth forest reacts rapidly to changes in soil moisture and shapes whole-tree carbon allocation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 24885-24892.	7.1	50
36	A dual-biomarker approach for quantification of changes in relative humidity from sedimentary lipid $\delta^{13}C$ and δ^2H ratios. <i>Climate of the Past</i> , 2017, 13, 741-757.	3.4	49

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37	Nitrogen fixation and metabolism by groundwater-dependent perennial plants in a hyperarid desert. <i>Oecologia</i> , 2004, 141, 385-394.	2.0	47
38	No role for xylem embolism or carbohydrate shortage in temperate trees during the severe 2015 drought. <i>Journal of Ecology</i> , 2019, 107, 334-349.	4.0	46
39	The influence of species and growing conditions on the $\delta^{18}\text{O}$ enrichment of leaf water and its impact on λ^* effective path length TM . <i>New Phytologist</i> , 2009, 184, 619-630.	7.3	45
40	The enigma of effective path length for $\delta^{18}\text{O}$ enrichment in leaf water of conifers. <i>Plant, Cell and Environment</i> , 2015, 38, 2551-2565.	5.7	45
41	Finger Millet Growth and Nutrient Uptake Is Improved in Intercropping With Pigeon Pea Through $\delta^{15}\text{N}$ Biofertilization and $\delta^{15}\text{N}$ Bioirrigation-Mediated by Arbuscular Mycorrhizal Fungi and Plant Growth Promoting Rhizobacteria. <i>Frontiers in Environmental Science</i> , 2018, 6, .	3.3	44
42	Concentrations and $\delta^2\text{H}$ values of cuticular n-alkanes vary significantly among plant organs, species and habitats in grasses from an alpine and a temperate European grassland. <i>Oecologia</i> , 2015, 178, 981-998.	2.0	40
43	Lack of hydraulic recovery as a cause of post-drought foliage reduction and canopy decline in European beech. <i>New Phytologist</i> , 2022, 234, 1195-1205.	7.3	40
44	Losing half the conductive area hardly impacts the water status of mature trees. <i>Scientific Reports</i> , 2018, 8, 15006.	3.3	39
45	Prediction of herbage yield in grassland: How well do Ellenberg N-values perform?. <i>Applied Vegetation Science</i> , 2007, 10, 15-24.	1.9	38
46	The multifaceted relationship between leaf water $\delta^{18}\text{O}$ enrichment and transpiration rate. <i>Plant, Cell and Environment</i> , 2013, 36, 1239-1241.	5.7	37
47	Seasonal variation of leaf wax n-alkane production and $\delta^2\text{H}$ values from the evergreen oak tree, <i>Quercus agrifolia</i> . <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 124-142.	1.0	37
48	Complementary water uptake depth of <i>Quercus petraea</i> and <i>Pinus sylvestris</i> in mixed stands during an extreme drought. <i>Plant and Soil</i> , 2019, 437, 93-115.	3.7	37
49	Contrasting stomatal sensitivity to temperature and soil drought in mature alpine conifers. <i>Plant, Cell and Environment</i> , 2019, 42, 1674-1689.	5.7	37
50	Rapid atmospheric transport and large-scale deposition of recently synthesized plant waxes. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 222, 599-617.	3.9	36
51	Tightly bound soil water introduces isotopic memory effects on mobile and extractable soil water pools. <i>Isotopes in Environmental and Health Studies</i> , 2017, 53, 368-381.	1.0	35
52	Oxygen isotope ratios ($^{18}\text{O}/^{16}\text{O}$) of hemicellulose-derived sugar biomarkers in plants, soils and sediments as paleoclimate proxy II: Insight from a climate transect study. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 126, 624-634.	3.9	33
53	Reliability and quality of water isotope data collected with a low-budget rain collector. <i>Rapid Communications in Mass Spectrometry</i> , 2014, 28, 879-885.	1.5	31
54	Precipitation isotope time series predictions from machine learning applied in Europe. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	31

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55	Carbon isotope composition of plant photosynthetic tissues reflects a Crassulacean Acid Metabolism (CAM) continuum in the majority of CAM lineages. <i>Perspectives in Plant Ecology, Evolution and Systematics</i> , 2021, 51, 125619.	2.7	31
56	Do $\delta^2\text{H}$ and $\delta^{18}\text{O}$ in leaf water reflect environmental drivers differently?. <i>New Phytologist</i> , 2022, 235, 41-51.	7.3	29
57	Soil nutrients and lowered source:sink ratio mitigate effects of mild but not of extreme drought in trees. <i>Environmental and Experimental Botany</i> , 2020, 169, 103905.	4.2	28
58	Soil nutrient availability alters tree carbon allocation dynamics during drought. <i>Tree Physiology</i> , 2021, 41, 697-707.	3.1	28
59	High potential, but low actual, glycine uptake of dominant plant species in three Australian land-use types with intermediate N availability. <i>Plant and Soil</i> , 2009, 325, 109-121.	3.7	27
60	The $\delta^{18}\text{O}$ signal transfer from water vapour to leaf water and assimilates varies among plant species and growth forms. <i>Plant, Cell and Environment</i> , 2020, 43, 510-523.	5.7	27
61	Sources and abundances of leaf waxes in aerosols in central Europe. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 198, 299-314.	3.9	24
62	A bottom-up quantification of foliar mercury uptake fluxes across Europe. <i>Biogeosciences</i> , 2020, 17, 6441-6456.	3.3	24
63	Leaf water $\delta^{18}\text{O}$ and $\delta^2\text{H}$ enrichment along vertical canopy profiles in a broadleaved and a conifer forest tree. <i>Plant, Cell and Environment</i> , 2017, 40, 1086-1103.	5.7	21
64	Timing of drought in the growing season and strong legacy effects determine the annual productivity of temperate grasses in a changing climate. <i>Biogeosciences</i> , 2021, 18, 585-604.	3.3	21
65	Vegetation Dynamics at the Upper Reaches of a Tropical Montane Forest are Driven by Disturbance Over the Past 7300 Years. <i>Arctic, Antarctic, and Alpine Research</i> , 2014, 46, 787-799.	1.1	20
66	Bioirrigation: a common mycorrhizal network facilitates the water transfer from deep-rooted pigeon pea to shallow-rooted finger millet under drought. <i>Plant and Soil</i> , 2019, 440, 277-292.	3.7	20
67	Deep-rooted pigeon pea promotes the water relations and survival of shallow-rooted finger millet during drought despite strong competitive interactions at ambient water availability. <i>PLoS ONE</i> , 2020, 15, e0228993.	2.5	20
68	On the use of leaf water to determine plant water source: A proof of concept. <i>Hydrological Processes</i> , 2021, 35, e14073.	2.6	20
69	Past and future snowmelt trends in the Swiss Alps: the role of temperature and snowpack. <i>Climatic Change</i> , 2021, 165, 1.	3.6	20
70	Assessing the recovery of a long-lived herb following logging: <i>Trillium ovatum</i> across a 424-year chronosequence. <i>Forest Ecology and Management</i> , 2005, 210, 107-116.	3.2	19
71	Flowering phenology in alpine grassland strongly responds to shifts in snowmelt but weakly to summer drought. <i>Alpine Botany</i> , 2021, 131, 73-88.	2.4	19
72	Invasive knotweed has greater nitrogen-use efficiency than native plants: evidence from a 15N pulse-chasing experiment. <i>Oecologia</i> , 2019, 191, 389-396.	2.0	18

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73	Water relations of drought-stressed temperate trees benefit from short drought-intermittent rainfall events. <i>Agricultural and Forest Meteorology</i> , 2019, 265, 70-77.	4.8	16
74	Effects of plant productivity and species richness on the drought response of soil respiration in temperate grasslands. <i>PLoS ONE</i> , 2018, 13, e0209031.	2.5	14
75	Application of Mycorrhiza and Soil from a Permaculture System Improved Phosphorus Acquisition in Naranjilla. <i>Frontiers in Plant Science</i> , 2017, 8, 1263.	3.6	13
76	TreeNetâ€‘The Biological Drought and Growth Indicator Network. <i>Frontiers in Forests and Global Change</i> , 2021, 4, .	2.3	13
77	Low secondary leaf wax<i>n</i>-alkane synthesis on fully mature leaves of C3 grasses grown at controlled environmental conditions and variable humidity. <i>Rapid Communications in Mass Spectrometry</i> , 2017, 31, 218-226.	1.5	12
78	Dynamic ² H irrigation pulse labelling reveals rapid infiltration and mixing of precipitation in the soil and speciesâ€‘specific water uptake depths of trees in a temperate forest. <i>Ecohydrology</i> , 2021, 14, e2322.	2.4	12
79	Using plant physiological stable oxygen isotope models to counter food fraud. <i>Scientific Reports</i> , 2021, 11, 17314.	3.3	12
80	Species variation in the hydrogen isotope composition of leaf cellulose is mostly driven by isotopic variation in leaf sucrose. <i>Plant, Cell and Environment</i> , 2022, 45, 2636-2651.	5.7	11
81	Testing the efficiency of three 15N-labeled nitrogen compounds for indirect labeling of grasshoppers via plants in the field. <i>Entomologia Experimentalis Et Applicata</i> , 2005, 116, 219-226.	1.4	10
82	Improving the extraction and purification of leaf and phloem sugars for oxygen isotope analyses. <i>Rapid Communications in Mass Spectrometry</i> , 2020, 34, e8854.	1.5	10
83	Metabolic exchange between pathways for isoprenoid synthesis and implications for biosynthetic hydrogen isotope fractionation. <i>New Phytologist</i> , 2021, 231, 1708-1719.	7.3	10
84	Data do not support large-scale oligotrophication of terrestrial ecosystems. <i>Nature Ecology and Evolution</i> , 2019, 3, 1285-1286.	7.8	9
85	Temperature and moisture variability in the eastern Mediterranean region during Marine Isotope Stages 11â€‘10 based on biomarker analysis of the Tenaghi Philippon peat deposit. <i>Quaternary Science Reviews</i> , 2019, 225, 105977.	3.0	8
86	Explicitly accounting for needle sugar pool size crucial for predicting intraâ€‘seasonal dynamics of needle carbohydrates ¹⁸ O and ¹³ C. <i>New Phytologist</i> , 2022, 236, 2044-2060.	7.3	8
87	Reduced plant water use can explain higher soil moisture in organic compared to conventional farming systems. <i>Agriculture, Ecosystems and Environment</i> , 2022, 332, 107915.	5.3	7
88	Innate and learned olfactory attraction to flowering plants by the parasitoid <i>Cotesia rubecula</i> (Marshall, 1885) (Hymenoptera: Braconidae): Potential impacts on conservation biological control. <i>Biological Control</i> , 2019, 132, 16-22.	3.0	6
89	Validation and calibration of soil ² H and brGDGTs along (E-W) and strike (N-S) of the Himalayan climatic gradient. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 290, 408-423.	3.9	6
90	Climate Change Modulates Multitrophic Interactions Between Maize, A Root Herbivore, and Its Enemies. <i>Journal of Chemical Ecology</i> , 2021, 47, 889-906.	1.8	6

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91	Constraining parameter uncertainty for predicting oxygen and hydrogen isotope values in fruit. <i>Journal of Experimental Botany</i> , 2022, 73, 5016-5032.	4.8	5
92	Spatial Arrangement and Biofertilizers Enhance the Performance of Legume-Millet Intercropping System in Rainfed Areas of Southern India. <i>Frontiers in Sustainable Food Systems</i> , 2021, 5, .	3.9	2
93	Effects of phenotypic variability on the oxygen and hydrogen isotope compositions of grains in different winter wheat varieties. <i>Isotopes in Environmental and Health Studies</i> , 2022, 58, 60-80.	1.0	1
94	Stable Isotopes as Indicators, Tracers, and Recorders of Ecological Change: Synthesis and Outlook. <i>Journal of Nano Education (Print)</i> , 2007, 1, 399-405.	0.3	0
95	Addressing the Functional Value of Biodiversity for Ecosystem Functioning Using Stable Isotopes. <i>Journal of Nano Education (Print)</i> , 2007, 1, 345-359.	0.3	0