

# Rolf T W Siegwolf

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/2513917/rolf-t-w-siegwolf-publications-by-citations.pdf>

**Version:** 2024-04-23

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

193  
papers

10,157  
citations

58  
h-index

92  
g-index

198  
ext. papers

11,588  
ext. citations

5.4  
avg, IF

6.15  
L-index

#	Paper	IF	Citations
193	Linking stable oxygen and carbon isotopes with stomatal conductance and photosynthetic capacity: a conceptual model. <i>Oecologia</i> , <b>2000</b> , 125, 350-357	2.9	442
192	Carbon flux and growth in mature deciduous forest trees exposed to elevated CO <sub>2</sub> . <i>Science</i> , <b>2005</b> , 309, 1360-2	33.3	433
191	Carbon isotope discrimination indicates improving water-use efficiency of trees in northern Eurasia over the last 100 years. <i>Global Change Biology</i> , <b>2004</b> , 10, 2109-2120	11.4	307
190	Plant responses to rising vapor pressure deficit. <i>New Phytologist</i> , <b>2020</b> , 226, 1550-1566	9.8	249
189	Water-use strategies in two co-occurring Mediterranean evergreen oaks: surviving the summer drought. <i>Tree Physiology</i> , <b>2007</b> , 27, 793-803	4.2	241
188	Soil Respiration in European Grasslands in Relation to Climate and Assimilate Supply. <i>Ecosystems</i> , <b>2008</b> , 11, 1352-1367	3.9	239
187	Does photosynthesis affect grassland soil-respired CO <sub>2</sub> and its carbon isotope composition on a diurnal timescale?. <i>New Phytologist</i> , <b>2009</b> , 182, 451-460	9.8	224
186	Drought response of five conifer species under contrasting water availability suggests high vulnerability of Norway spruce and European larch. <i>Global Change Biology</i> , <b>2013</b> , 19, 3184-99	11.4	204
185	Correlating $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ in cellulose of trees. <i>Plant, Cell and Environment</i> , <b>1997</b> , 20, 1543-1550	8.4	196
184	Estimating the uptake of traffic-derived NO from N abundance in Norway spruce needles. <i>Oecologia</i> , <b>1999</b> , 118, 124-131	2.9	164
183	Reducing uncertainties in $\delta^{13}\text{C}$ analysis of tree rings: Pooling, milling, and cellulose extraction. <i>Journal of Geophysical Research</i> , <b>1998</b> , 103, 19519-19526		149
182	Spatial variability and temporal trends in water-use efficiency of European forests. <i>Global Change Biology</i> , <b>2014</b> , 20, 3700-12	11.4	140
181	Increased N deposition retards mineralization of old soil organic matter. <i>Soil Biology and Biochemistry</i> , <b>2003</b> , 35, 1683-1692	7.5	137
180	Seasonal transfer of oxygen isotopes from precipitation and soil to the tree ring: source water versus needle water enrichment. <i>New Phytologist</i> , <b>2014</b> , 202, 772-783	9.8	134
179	Increased water-use efficiency does not lead to enhanced tree growth under xeric and mesic conditions. <i>New Phytologist</i> , <b>2014</b> , 203, 94-109	9.8	133
178	Belowground carbon trade among tall trees in a temperate forest. <i>Science</i> , <b>2016</b> , 352, 342-4	33.3	117
177	The long way down--are carbon and oxygen isotope signals in the tree ring uncoupled from canopy physiological processes?. <i>Tree Physiology</i> , <b>2011</b> , 31, 1088-102	4.2	114

176	Canopy CO <sub>2</sub> enrichment permits tracing the fate of recently assimilated carbon in a mature deciduous forest. <i>New Phytologist</i> , <b>2006</b> , 172, 319-29	9.8	114
175	Central European hardwood trees in a high-CO <sub>2</sub> future: synthesis of an 8-year forest canopy CO <sub>2</sub> enrichment project. <i>Journal of Ecology</i> , <b>2013</b> , 101, 1509-1519	6	113
174	Progress and challenges in using stable isotopes to trace plant carbon and water relations across scales. <i>Biogeosciences</i> , <b>2012</b> , 9, 3083-3111	4.6	110
173	Hydraulic Lift in Cork Oak Trees in a Savannah-Type Mediterranean Ecosystem and its Contribution to the Local Water Balance. <i>Plant and Soil</i> , <b>2006</b> , 282, 361-378	4.2	110
172	Stable carbon isotopes in tree rings of beech: climatic versus site-related influences. <i>Trees - Structure and Function</i> , <b>1997</b> , 11, 291-297	2.6	109
171	Oxygen Isotope Analysis of Cellulose: An Interlaboratory Comparison. <i>Analytical Chemistry</i> , <b>1998</b> , 70, 2074-2080	7.8	109
170	Inter- and intra-annual stable carbon and oxygen isotope signals in response to drought in Mediterranean pines. <i>Agricultural and Forest Meteorology</i> , <b>2013</b> , 168, 59-68	5.8	107
169	Estimates of water vapor flux and canopy conductance of Scots pine at the tree level utilizing different xylem sap flow methods. <i>Theoretical and Applied Climatology</i> , <b>1996</b> , 53, 105-113	3	107
168	Effects of environmental parameters, leaf physiological properties and leaf water relations on leaf water delta18O enrichment in different Eucalyptus species. <i>Plant, Cell and Environment</i> , <b>2008</b> , 31, 738-511	8.4	102
167	Biotic, Abiotic, and Management Controls on the Net Ecosystem CO <sub>2</sub> Exchange of European Mountain Grassland Ecosystems. <i>Ecosystems</i> , <b>2008</b> , 11, 1338-1351	3.9	102
166	Carbon fluxes to the soil in a mature temperate forest assessed by <sup>13</sup> C isotope tracing. <i>Oecologia</i> , <b>2004</b> , 141, 489-501	2.9	98
165	Recovery of trees from drought depends on belowground sink control. <i>Nature Plants</i> , <b>2016</b> , 2, 16111	11.5	96
164	Short-term responses of ecosystem carbon fluxes to experimental soil warming at the Swiss alpine treeline. <i>Biogeochemistry</i> , <b>2010</b> , 97, 7-19	3.8	93
163	First detection of nitrogen from NO <sub>x</sub> in tree rings: a <sup>15</sup> N/ <sup>14</sup> N study near a motorway. <i>Atmospheric Environment</i> , <b>2004</b> , 38, 2779-2787	5.3	93
162	A 350 year drought reconstruction from Alpine tree ring stable isotopes. <i>Global Biogeochemical Cycles</i> , <b>2010</b> , 24, n/a-n/a	5.9	92
161	Seasonal origins of soil water used by trees. <i>Hydrology and Earth System Sciences</i> , <b>2019</b> , 23, 1199-1210	5.5	89
160	A dynamic leaf gas-exchange strategy is conserved in woody plants under changing ambient CO <sub>2</sub> : evidence from carbon isotope discrimination in paleo and CO <sub>2</sub> enrichment studies. <i>Global Change Biology</i> , <b>2016</b> , 22, 889-902	11.4	83
159	Low-frequency noise in <sup>13</sup> C and <sup>18</sup> O tree ring data: A case study of <i>Pinus uncinata</i> in the Spanish Pyrenees. <i>Global Biogeochemical Cycles</i> , <b>2010</b> , 24, n/a-n/a	5.9	83

158	Tree rings indicate different drought resistance of a native ( <i>Abies alba</i> Mill.) and a nonnative ( <i>Picea abies</i> (L.) Karst.) species co-occurring at a dry site in Southern Italy. <i>Forest Ecology and Management</i> , <b>2009</b> , 257, 820-828	3.9	83
157	Is the dual-isotope conceptual model fully operational?. <i>Tree Physiology</i> , <b>2012</b> , 32, 1179-82	4.2	80
156	Fruit production in three masting tree species does not rely on stored carbon reserves. <i>Oecologia</i> , <b>2013</b> , 171, 653-62	2.9	79
155	Do centennial tree-ring and stable isotope trends of <i>Larix gmelinii</i> (Rupr.) Rupr. indicate increasing water shortage in the Siberian north?. <i>Oecologia</i> , <b>2009</b> , 161, 825-35	2.9	75
154	Stable isotope analysis reveals differential effects of soil nitrogen and nitrogen dioxide on the water use efficiency in hybrid poplar leaves. <i>New Phytologist</i> , <b>2001</b> , 149, 233-246	9.8	75
153	Soil warming alters microbial substrate use in alpine soils. <i>Global Change Biology</i> , <b>2014</b> , 20, 1327-38	11.4	74
152	Sustained enhancement of photosynthesis in mature deciduous forest trees after 8 years of free air CO <sub>2</sub> enrichment. <i>Planta</i> , <b>2010</b> , 232, 1115-25	4.7	74
151	An investigation of the common signal in tree ring stable isotope chronologies at temperate sites. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		74
150	20th-century changes in carbon isotopes and water-use efficiency: tree-ring-based evaluation of the CLM4.5 and LPX-Bern models. <i>Biogeosciences</i> , <b>2017</b> , 14, 2641-2673	4.6	73
149	Ideas and perspectives: Tracing terrestrial ecosystem water fluxes using hydrogen and oxygen stable isotopes – challenges and opportunities from an interdisciplinary perspective. <i>Biogeosciences</i> , <b>2018</b> , 15, 6399-6415	4.6	73
148	Phylogenetically balanced evidence for structural and carbon isotope responses in plants along elevational gradients. <i>Oecologia</i> , <b>2010</b> , 162, 853-63	2.9	72
147	The input and fate of new C in two forest soils under elevated CO <sub>2</sub> . <i>Global Change Biology</i> , <b>2003</b> , 9, 862-874		72
146	Rapid mixing between old and new C pools in the canopy of mature forest trees. <i>Plant, Cell and Environment</i> , <b>2007</b> , 30, 963-72	8.4	70
145	Responses of belowground carbon allocation dynamics to extended shading in mountain grassland. <i>New Phytologist</i> , <b>2013</b> , 198, 116-126	9.8	67
144	Spatial and temporal oxygen isotope trends at the northern tree-line in Eurasia. <i>Geophysical Research Letters</i> , <b>2002</b> , 29, 7-1-7-4	4.9	66
143	Fast response of Scots pine to improved water availability reflected in tree-ring width and delta <sup>13</sup> C. <i>Plant, Cell and Environment</i> , <b>2010</b> , 33, 1351-60	8.4	65
142	Preparation of starch and soluble sugars of plant material for the analysis of carbon isotope composition: a comparison of methods. <i>Rapid Communications in Mass Spectrometry</i> , <b>2009</b> , 23, 2476-88	2.2	65
141	Carbon and Nitrogen Dynamics in Preferential Flow Paths and Matrix of a Forest Soil. <i>Soil Science Society of America Journal</i> , <b>2001</b> , 65, 1529-1538	2.5	65

140	Determination of primary and secondary sources of organic acids and carbonaceous aerosols using stable carbon isotopes. <i>Atmospheric Environment</i> , <b>2009</b> , 43, 431-437	5.3	63
139	Inter-laboratory comparison of cryogenic water extraction systems for stable isotope analysis of soil water. <i>Hydrology and Earth System Sciences</i> , <b>2018</b> , 22, 3619-3637	5.5	61
138	The fate of recently fixed carbon after drought release: towards unravelling C storage regulation in <i>Tilia platyphyllos</i> and <i>Pinus sylvestris</i> . <i>Plant, Cell and Environment</i> , <b>2017</b> , 40, 1711-1724	8.4	60
137	Long-term effects of drought on tree-ring growth and carbon isotope variability in Scots pine in a dry environment. <i>Tree Physiology</i> , <b>2017</b> , 37, 1028-1041	4.2	59
136	Diffusive fractionation complicates isotopic partitioning of autotrophic and heterotrophic sources of soil respiration. <i>Plant, Cell and Environment</i> , <b>2010</b> , 33, 1804-19	8.4	58
135	Allocation dynamics of recently fixed carbon in beech saplings in response to increased temperatures and drought. <i>Tree Physiology</i> , <b>2015</b> , 35, 585-98	4.2	57
134	Tracing carbon uptake from a natural CO <sub>2</sub> spring into tree rings: an isotope approach. <i>Tree Physiology</i> , <b>2003</b> , 23, 997-1004	4.2	57
133	Climatic sensitivity of $\delta^{18}\text{O}$ in the wood and cellulose of tree rings: Results from a mixed stand of <i>Acer pseudoplatanus</i> L. and <i>Fagus sylvatica</i> L.. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , <b>2008</b> , 261, 193-202	2.9	56
132	Seasonal Variations in Soil and Plant Water Status in a <i>Quercus suber</i> L. Stand: Roots as Determinants of Tree Productivity and Survival in the Mediterranean-type Ecosystem. <i>Plant and Soil</i> , <b>2006</b> , 283, 119-135	4.2	54
131	Temporal stability of climate-isotope relationships in tree rings of oak and pine (Ticino, Switzerland). <i>Global Biogeochemical Cycles</i> , <b>2007</b> , 21, n/a-n/a	5.9	53
130	Tracing Changes in Ecosystem Function under Elevated Carbon Dioxide Conditions. <i>BioScience</i> , <b>2003</b> , 53, 805	5.7	53
129	A synthesis of hydrogen isotope variability and its hydrological significance at the Qinghai-Tibetan Plateau. <i>Quaternary International</i> , <b>2013</b> , 313-314, 3-16	2	52
128	Spatial patterns of climatic changes in the Eurasian north reflected in Siberian larch tree-ring parameters and stable isotopes. <i>Global Change Biology</i> , <b>2010</b> , 16, 1003-1018	11.4	52
127	Growth and carbon relations of mature <i>Picea abies</i> trees under 5 years of free-air CO <sub>2</sub> enrichment. <i>Journal of Ecology</i> , <b>2016</b> , 104, 1720-1733	6	52
126	Comparison of $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ values between tree-ring whole wood and cellulose in five species growing under two different site conditions. <i>Rapid Communications in Mass Spectrometry</i> , <b>2015</b> , 29, 2233-44	2.2	51
125	Isotope ratio mass spectrometry as a tool for source inference in forensic science: A critical review. <i>Forensic Science International</i> , <b>2015</b> , 251, 139-58	2.6	50
124	Summer temperature dependency of larch budmoth outbreaks revealed by Alpine tree-ring isotope chronologies. <i>Oecologia</i> , <b>2009</b> , 160, 353-65	2.9	48
123	Isotopic composition ( $\delta^{13}\text{C}$ , $\delta^{18}\text{O}$ ) in wood and cellulose of Siberian larch trees for early Medieval and recent periods. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		48

122	Elevated atmospheric CO <sub>2</sub> and increased N deposition effects on dissolved organic carbon fluxes from $\delta^{13}\text{C}$ signature. <i>Soil Biology and Biochemistry</i> , <b>2002</b> , 34, 355-366	7.5	48
121	Microbial assimilation of plant-derived carbon in soil traced by isotope analysis. <i>Biology and Fertility of Soils</i> , <b>2005</b> , 41, 153-162	6.1	47
120	Pathways and dynamics of $^{15}\text{NO}_3^-$ and $^{15}\text{NH}_4^+$ applied in a mountain <i>Picea abies</i> forest and in a nearby meadow in central Switzerland. <i>Soil Biology and Biochemistry</i> , <b>2006</b> , 38, 1645-1657	7.5	46
119	Effects of six years atmospheric CO <sub>2</sub> enrichment on plant, soil, and soil microbial C of a calcareous grassland. <i>Plant and Soil</i> , <b>2001</b> , 233, 189-202	4.2	46
118	Estimation of Hg <sup>0</sup> exchange between ecosystems and the atmosphere using $^{222}\text{Rn}$ and Hg <sup>0</sup> concentration changes in the stable nocturnal boundary layer. <i>Atmospheric Environment</i> , <b>2006</b> , 40, 856-868	5.2	45
117	Carbon allocation in calcareous grassland under elevated CO <sub>2</sub> : a combined $^{13}\text{C}$ pulse-labelling/soil physical fractionation study. <i>Functional Ecology</i> , <b>2001</b> , 15, 43-50	5.6	44
116	Influence of atmospheric circulation patterns on the oxygen isotope ratio of tree rings in the Alpine region. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		43
115	Effect of water availability on leaf water isotopic enrichment in beech seedlings shows limitations of current fractionation models. <i>Plant, Cell and Environment</i> , <b>2009</b> , 32, 1285-96	8.4	43
114	Impact of interspecific competition and drought on the allocation of new assimilates in trees. <i>Plant Biology</i> , <b>2016</b> , 18, 785-96	3.7	43
113	The impact of an inverse climate-isotope relationship in soil water on the oxygen-isotope composition of <i>Larix gmelinii</i> in Siberia. <i>New Phytologist</i> , <b>2016</b> , 209, 955-64	9.8	42
112	Stable isotope coherence in the earlywood and latewood of tree-line conifers. <i>Chemical Geology</i> , <b>2009</b> , 268, 52-57	4.2	42
111	Metabolic fluxes, carbon isotope fractionation and respiration—lessons to be learned from plant biochemistry. <i>New Phytologist</i> , <b>2011</b> , 191, 10-15	9.8	41
110	Tree-ring growth and stable isotopes ( $^{13}\text{C}$ and $^{15}\text{N}$ ) detect effects of wildfires on tree physiological processes in <i>Pinus sylvestris</i> L.. <i>Trees - Structure and Function</i> , <b>2011</b> , 25, 627-636	2.6	41
109	Carbon allocation in shoots of alpine treeline conifers in a CO <sub>2</sub> enriched environment. <i>Trees - Structure and Function</i> , <b>2007</b> , 21, 283-294	2.6	41
108	Eddy Covariance Measurements On Mountain Slopes: The Advantage Of Surface-Normal Sensor Orientation Over A Vertical Set-Up. <i>Boundary-Layer Meteorology</i> , <b>2000</b> , 96, 371-392	3.4	40
107	Lack of photosynthetic or stomatal regulation after 9 years of elevated [CO <sub>2</sub> ] and 4 years of soil warming in two conifer species at the alpine treeline. <i>Plant, Cell and Environment</i> , <b>2014</b> , 37, 315-26	8.4	39
106	Impact of different nitrogen emission sources on tree physiology as assessed by a triple stable isotope approach. <i>Atmospheric Environment</i> , <b>2009</b> , 43, 410-418	5.3	39
105	A multi-proxy approach for revealing recent climatic changes in the Russian Altai. <i>Climate Dynamics</i> , <b>2012</b> , 38, 175-188	4.2	38

104	Tracing fresh assimilates through <i>Larix decidua</i> exposed to elevated CO <sub>2</sub> and soil warming at the alpine treeline using compound-specific stable isotope analysis. <i>New Phytologist</i> , <b>2013</b> , 197, 838-849	9.8	38
103	Resilient Leaf Physiological Response of European Beech ( <i>L.</i> ) to Summer Drought and Drought Release. <i>Frontiers in Plant Science</i> , <b>2018</b> , 9, 187	6.2	37
102	The enigma of effective path length for (18) O enrichment in leaf water of conifers. <i>Plant, Cell and Environment</i> , <b>2015</b> , 38, 2551-65	8.4	37
101	Oxygen isotopes in tree rings of <i>Abies alba</i> : The climatic significance of interdecadal variations. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 12461-12470		37
100	Long-term ecological consequences of forest fires in the continuous permafrost zone of Siberia. <i>Environmental Research Letters</i> , <b>2020</b> , 15, 034061	6.2	35
99	Drought response of mesophyll conductance in forest understory species--impacts on water-use efficiency and interactions with leaf water movement. <i>Physiologia Plantarum</i> , <b>2014</b> , 152, 98-114	4.6	35
98	Twentieth century trends in tree ring stable isotopes ( $\delta^{13}C$ and $\delta^{18}O$ ) of <i>Larix sibirica</i> under dry conditions in the forest steppe in Siberia. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115,		35
97	Effect of inoculation and leaf litter amendment on establishment of nodule-forming <i>Frankia</i> populations in soil. <i>Applied and Environmental Microbiology</i> , <b>2001</b> , 67, 2603-9	4.8	35
96	Evaluation of a liquid chromatography method for compound-specific $\delta^{13}C$ analysis of plant carbohydrates in alkaline media. <i>Rapid Communications in Mass Spectrometry</i> , <b>2012</b> , 26, 2173-85	2.2	34
95	Immobilization, stabilization and remobilization of nitrogen in forest soils at elevated CO <sub>2</sub> : a 15N and 13C tracer study. <i>Global Change Biology</i> , <b>2005</b> , 11, 1816-1827	11.4	34
94	Flow of Deposited Inorganic N in Two Gleysol-dominated Mountain Catchments Traced with 15NO <sub>3</sub> <sup>-</sup> and 15NH <sub>4</sub> <sup>+</sup> . <i>Biogeochemistry</i> , <b>2005</b> , 76, 453-475	3.8	34
93	Inferring foliar water uptake using stable isotopes of water. <i>Oecologia</i> , <b>2017</b> , 184, 763-766	2.9	32
92	Oxygen isotope fractionations across individual leaf carbohydrates in grass and tree species. <i>Plant, Cell and Environment</i> , <b>2017</b> , 40, 1658-1670	8.4	30
91	The effect of O-labelled water vapour on the oxygen isotope ratio of water and assimilates in plants at high humidity. <i>New Phytologist</i> , <b>2018</b> , 217, 105-116	9.8	30
90	Carbon transfer, partitioning and residence time in the plant-soil system: a comparison of two $\delta^{13}C$ labelling techniques. <i>Biogeosciences</i> , <b>2014</b> , 11, 1637-1648	4.6	30
89	Development of acute frost drought in <i>Rhododendron ferrugineum</i> at the alpine timberline. <i>Oecologia</i> , <b>1985</b> , 67, 298-300	2.9	29
88	Spatial variation in throughfall, soil, and plant water isotopes in a temperate forest. <i>Ecohydrology</i> , <b>2018</b> , 12, e2059	2.5	29
87	Growth cessation uncouples isotopic signals in leaves and tree rings of drought-exposed oak trees. <i>Tree Physiology</i> , <b>2015</b> , 35, 1095-105	4.2	28

86	ECOMONT: a combined approach of field measurements and process-based modelling for assessing effects of land-use changes in mountain landscapes. <i>Ecological Modelling</i> , <b>1998</b> , 113, 167-178	3	28
85	Volcanic explosive eruptions of the Vesuvio decrease tree-ring growth but not photosynthetic rates in the surrounding forests. <i>Global Change Biology</i> , <b>2007</b> , 13, 1122-1137	11.4	28
84	Malate as a key carbon source of leaf dark-respired CO <sub>2</sub> across different environmental conditions in potato plants. <i>Journal of Experimental Botany</i> , <b>2015</b> , 66, 5769-81	7	27
83	<sup>15</sup> N immobilization in forest soil: a sterilization experiment coupled with <sup>15</sup> CPMAS NMR spectroscopy. <i>European Journal of Soil Science</i> , <b>2008</b> , 59, 467-475	3.4	27
82	Swiss tree rings reveal warm and wet summers during medieval times. <i>Geophysical Research Letters</i> , <b>2014</b> , 41, 1732-1737	4.9	26
81	Determination of the aerosol yield of isoprene in the presence of an organic seed with carbon isotope analysis. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 6697-702	10.3	26
80	Using eddy covariance and stable isotope mass balance techniques to estimate fog water contributions to a Costa Rican cloud forest during the dry season. <i>Hydrological Processes</i> , <b>2011</b> , 25, 429-437	2.3	25
79	Can we use the CO <sub>2</sub> concentrations determined by continuous-flow isotope ratio mass spectrometry from small samples for the Keeling plot approach?. <i>Rapid Communications in Mass Spectrometry</i> , <b>2008</b> , 22, 4029-34	2.2	25
78	Nitrogen partitioning in oak leaves depends on species, provenance, climate conditions and soil type. <i>Plant Biology</i> , <b>2013</b> , 15 Suppl 1, 198-209	3.7	24
77	Species specific and environment induced variation of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ in alpine plants. <i>Frontiers in Plant Science</i> , <b>2015</b> , 6, 423	6.2	24
76	Climatic isotope signals in tree rings masked by air pollution: A case study conducted along the Mont Blanc Tunnel access road (Western Alps, Italy). <i>Atmospheric Environment</i> , <b>2012</b> , 61, 169-179	5.3	24
75	Optimization of automated gas sample collection and isotope ratio mass spectrometric analysis of $\delta^{13}\text{C}$ of CO <sub>2</sub> in air. <i>Rapid Communications in Mass Spectrometry</i> , <b>2008</b> , 22, 3883-92	2.2	24
74	Oxygen isotopes in tree rings are less sensitive to changes in tree size and relative canopy position than carbon isotopes. <i>Plant, Cell and Environment</i> , <b>2018</b> , 41, 2899-2914	8.4	23
73	<sup>15</sup> N measurement of organic and inorganic substances by EA-IRMS: a speciation-dependent procedure. <i>Analytical and Bioanalytical Chemistry</i> , <b>2013</b> , 405, 159-76	4.4	23
72	Examining the response of needle carbohydrates from Siberian larch trees to climate using compound-specific $\delta^{13}\text{C}$ and concentration analyses. <i>Plant, Cell and Environment</i> , <b>2015</b> , 38, 2340-52	8.4	23
71	. <i>Pirineos</i> , <b>1996</b> , 147-148, 145-172	1	23
70	Site-specific water-use strategies of mountain pine and larch to cope with recent climate change. <i>Tree Physiology</i> , <b>2016</b> , 36, 942-53	4.2	23
69	Long-term <sup>14</sup> C labeling provides evidence for temporal and spatial carbon allocation patterns in mature <i>Picea abies</i> . <i>Oecologia</i> , <b>2014</b> , 175, 747-62	2.9	22



68	Tissue-specific variation of $\delta^{13}\text{C}$ in mature canopy trees in a temperate forest in central Europe. <i>Basic and Applied Ecology</i> , <b>2005</b> , 6, 519-534	3.2	22
67	Warming Effects on <i>Pinus sylvestris</i> in the Cold-Dry Siberian Forest-Steppe: Positive or Negative Balance of Trade?. <i>Forests</i> , <b>2017</b> , 8, 490	2.8	21
66	The application of tree-rings and stable isotopes for reconstructions of climate conditions in the Russian Altai. <i>Climatic Change</i> , <b>2013</b> , 120, 153-167	4.5	21
65	Environmental drivers of carbon and nitrogen isotopic signatures in peatland vascular plants along an altitude gradient. <i>Oecologia</i> , <b>2016</b> , 180, 257-64	2.9	20
64	The response of $\delta^{13}\text{C}$ , $\delta^{18}\text{O}$ and cell anatomy of <i>Larix gmelinii</i> tree rings to differing soil active layer depths. <i>Dendrochronologia</i> , <b>2015</b> , 34, 51-59	2.8	20
63	Anthropogenic $\text{NO}_x$ emissions alter the intrinsic water-use efficiency (WUEi) for <i>Quercus cerris</i> stands under Mediterranean climate conditions. <i>Environmental Pollution</i> , <b>2010</b> , 158, 2841-7	9.3	20
62	Carbon and nitrogen stable isotope signals for an entire alpine flora, based on herbarium samples. <i>Alpine Botany</i> , <b>2016</b> , 126, 153-166	2.5	20
61	<i>Larix decidua</i> $\delta^{13}\text{C}$ tree-ring cellulose mainly reflects the isotopic signature of winter snow in a high-altitude glacial valley of the European Alps. <i>Science of the Total Environment</i> , <b>2017</b> , 579, 230-237	10.2	17
60	Siberian tree-ring and stable isotope proxies as indicators of temperature and moisture changes after major stratospheric volcanic eruptions. <i>Climate of the Past</i> , <b>2019</b> , 15, 685-700	3.9	17
59	Testing a dual isotope model to track carbon and water gas exchanges in a Mediterranean forest. <i>IForest</i> , <b>2009</b> , 2, 59-66	1.3	17
58	Application of eco-physiological models to the climatic interpretation of $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ measured in Siberian larch tree-rings. <i>Dendrochronologia</i> , <b>2016</b> , 39, 51-59	2.8	17
57	An injection method for measuring the carbon isotope content of soil carbon dioxide and soil respiration with a tunable diode laser absorption spectrometer. <i>Rapid Communications in Mass Spectrometry</i> , <b>2010</b> , 24, 894-900	2.2	16
56	Determination of stable carbon isotopes of organic acids and carbonaceous aerosols in the atmosphere. <i>Rapid Communications in Mass Spectrometry</i> , <b>2006</b> , 20, 2343-7	2.2	16
55	Effect of Vapor Pressure Deficit on Gas Exchange in Wild-Type and Abscisic Acid-Insensitive Plants. <i>Plant Physiology</i> , <b>2019</b> , 181, 1573-1586	6.6	16
54	A cluster of stratospheric volcanic eruptions in the AD 530s recorded in Siberian tree rings. <i>Global and Planetary Change</i> , <b>2014</b> , 122, 140-150	4.2	14
53	Douglas-fir seedlings exhibit metabolic responses to increased temperature and atmospheric drought. <i>PLoS ONE</i> , <b>2014</b> , 9, e114165	3.7	14
52	Study of isotopic variations in black powder: reflections on the use of stable isotopes in forensic science for source inference. <i>Rapid Communications in Mass Spectrometry</i> , <b>2009</b> , 23, 2559-67	2.2	14
51	The influence of traffic and wood combustion on the stable isotopic composition of carbon monoxide. <i>Atmospheric Chemistry and Physics</i> , <b>2009</b> , 9, 3147-3161	6.8	14

50	Dynamics of soil organic matter turnover and soil respired CO <sub>2</sub> in a temperate grassland labelled with <sup>13</sup> C. <i>European Journal of Soil Science</i> , <b>2007</b> , 58, 1364-1372	3.4	14
49	Stable oxygen isotopes (delta <sup>18</sup> O) in <i>Austrocedrus chilensis</i> tree rings reflect climate variability in northwestern Patagonia, Argentina. <i>International Journal of Biometeorology</i> , <b>2006</b> , 51, 97-105	3.7	14
48	Can tree-ring $\delta^{15}\text{N}$ be used as a proxy for foliar $\delta^{15}\text{N}$ in European beech and Norway spruce?. <i>Trees - Structure and Function</i> , <b>2016</b> , 30, 627-638	2.6	13
47	Using Stable Isotopes as Indicators, Tracers, and Recorders of Ecological Change: Some Context and Background. <i>Journal of Nano Education (Print)</i> , <b>2007</b> , 1, 1-18		13
46	The O-signal transfer from water vapour to leaf water and assimilates varies among plant species and growth forms. <i>Plant, Cell and Environment</i> , <b>2020</b> , 43, 510-523	8.4	13
45	Long-term trends in leaf level gas exchange mirror tree-ring derived intrinsic water-use efficiency of <i>Pinus cembra</i> at treeline during the last century. <i>Agricultural and Forest Meteorology</i> , <b>2018</b> , 248, 251-258	5.8	12
44	Contribution of methane to aerosol carbon mass. <i>Atmospheric Environment</i> , <b>2016</b> , 141, 41-47	5.3	12
43	Quantification of dynamic soil-vegetation feedbacks following an isotopically labelled precipitation pulse. <i>Biogeosciences</i> , <b>2017</b> , 14, 2293-2306	4.6	11
42	A novel methodological approach for $\delta^{18}\text{O}$ analysis of sugars using gas chromatography-pyrolysis-isotope ratio mass spectrometry. <i>Isotopes in Environmental and Health Studies</i> , <b>2013</b> , 49, 492-502	1.5	11
41	The mobility of nitrogen across tree-rings of Norway spruce ( <i>Picea abies</i> L.) and the effect of extraction method on tree-ring $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ values. <i>Rapid Communications in Mass Spectrometry</i> , <b>2014</b> , 28, 1258-64	2.2	11
40	Metabolic Fate of the Carboxyl Groups of Malate and Pyruvate and their Influence on $\delta^{13}\text{C}$ of Leaf-Respired CO <sub>2</sub> during Light Enhanced Dark Respiration. <i>Frontiers in Plant Science</i> , <b>2016</b> , 7, 739	6.2	11
39	Carbon isotope discrimination during branch photosynthesis of <i>Fagus sylvatica</i> : a Bayesian modelling approach. <i>Plant, Cell and Environment</i> , <b>2014</b> , 37, 1516-35	8.4	10
38	Temperature versus species-specific influences on the stable oxygen isotope ratio of tree rings. <i>Trees - Structure and Function</i> , <b>2009</b> , 23, 801-811	2.6	10
37	A portable automated system for trace gas sampling in the field and stable isotope analysis in the laboratory. <i>Rapid Communications in Mass Spectrometry</i> , <b>2004</b> , 18, 2106-12	2.2	10
36	Plasticity in gas-exchange physiology of mature Scots pine and European larch drive short- and long-term adjustments to changes in water availability. <i>Plant, Cell and Environment</i> , <b>2017</b> , 40, 1972-1983	8.4	9
35	Is the 20th century warming unprecedented in the Siberian north?. <i>Quaternary Science Reviews</i> , <b>2013</b> , 73, 93-102	3.9	9
34	Multi-isotope labelling of organic matter by diffusion of $\delta^2\text{H}$ , $\delta^{18}\text{O}$ vapour and $\delta^{13}\text{C}$ -CO <sub>2</sub> into the leaves and its distribution within the plant. <i>Biogeosciences</i> , <b>2015</b> , 12, 1865-1879	4.6	9
33	Warm season precipitation signal in $\delta^3\text{H}$ values of wood lignin methoxyl groups from high elevation larch trees in Switzerland. <i>Rapid Communications in Mass Spectrometry</i> , <b>2017</b> , 31, 1589-1598	2.2	8

32	Increasing relevance of spring temperatures for Norway spruce trees in Davos, Switzerland, after the 1950s. <i>Trees - Structure and Function</i> , <b>2014</b> , 28, 183-191	2.6	8
31	Human Impacts on Tree-Ring Growth Reconstructed from Stable Isotopes <b>2007</b> , 49-62		8
30	A novel methylation derivatization method for $\delta^{18}\text{O}$ analysis of individual carbohydrates by gas chromatography/pyrolysis-isotope ratio mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , <b>2016</b> , 30, 221-9	2.2	8
29	Compound-Specific Carbon Isotopes and Concentrations of Carbohydrates and Organic Acids as Indicators of Tree Decline in Mountain Pine. <i>Forests</i> , <b>2018</b> , 9, 363	2.8	7
28	First detection of glacial meltwater signature in tree-ring $\delta^{18}\text{O}$ : Reconstructing past major glacier runoff events at Lago Verde (Miage Glacier, Italy). <i>Boreas</i> , <b>2014</b> , 43, 600-607	2.4	7
27	Dynamics of atmospheric nitrogen deposition in a temperate calcareous forest soil. <i>Journal of Environmental Quality</i> , <b>2008</b> , 37, 2012-21	3.4	7
26	The influence of increasing temperature and CO <sub>2</sub> concentration on recent growth of old-growth larch: contrasting responses at leaf and stem processes derived from tree-ring width and stable isotopes. <i>Tree Physiology</i> , <b>2018</b> , 38, 706-720	4.2	6
25	Carbon isotope discrimination during branch photosynthesis of <i>Fagus sylvatica</i> : field measurements using laser spectrometry. <i>Journal of Experimental Botany</i> , <b>2014</b> , 65, 1481-96	7	6
24	Human Impacts on Tree-Ring Growth Reconstructed from Stable Isotopes. <i>Journal of Nano Education (Print)</i> , <b>2007</b> , 1, 49-62		6
23	Compound-specific carbon isotope patterns in needles of conifer tree species from the Swiss National Park under recent climate change. <i>Plant Physiology and Biochemistry</i> , <b>2019</b> , 139, 264-272	5.4	5
22	Evidence for direct plant control on rhizosphere priming. <i>Rhizosphere</i> , <b>2016</b> , 2, 1-4	3.5	5
21	Spring arctic oscillation as a trigger of summer drought in Siberian subarctic over the past 1494 years. <i>Scientific Reports</i> , <b>2021</b> , 11, 19010	4.9	5
20	Oxygen isotope analysis of levoglucosan, a tracer of wood burning, in experimental and ambient aerosol samples. <i>Rapid Communications in Mass Spectrometry</i> , <b>2017</b> , 31, 2101-2108	2.2	4
19	Soil $\text{H}_2^{18}\text{O}$ labelling reveals the effect of drought on $\text{C}_2\text{H}_2^{18}\text{O}$ fluxes to the atmosphere. <i>Journal of Experimental Botany</i> , <b>2014</b> , 65, 5783-93	7	4
18	High-frequency stable isotope signals in uneven-aged forests as proxy for physiological responses to climate in Central Europe. <i>Tree Physiology</i> , <b>2021</b> , 41, 2046-2062	4.2	4
17	The MICE facility - a new tool to study plant-soil C cycling with a holistic approach. <i>Isotopes in Environmental and Health Studies</i> , <b>2017</b> , 53, 286-297	1.5	3
16	Environmental information from stable isotopes in tree rings of <i>Fagus sylvatica</i> <b>1998</b> , 241-253		3
15	Source partitioning of atmospheric methane using stable carbon isotope measurements in the Reuss Valley, Switzerland. <i>Isotopes in Environmental and Health Studies</i> , <b>2019</b> , 55, 1-24	1.5	2

14	Surrounding species diversity improves subtropical seedlings' carbon dynamics. <i>Ecology and Evolution</i> , <b>2018</b> , 8, 7055-7067	2.8	2
13	Tree-ring $\delta^{18}\text{O}$ from an Alpine catchment reveals changes in glacier stream water inputs between 1980 and 2010. <i>Arctic, Antarctic, and Alpine Research</i> , <b>2019</b> , 51, 250-264	1.8	2
12	Impact of Recent Climate Change on Water-Use Efficiency Strategies of <i>Larix sibirica</i> in the Altai-Sayan Mountain Range. <i>Forests</i> , <b>2020</b> , 11, 1103	2.8	2
11	Climatic Influences on Summer Use of Winter Precipitation by Trees. <i>Geophysical Research Letters</i> , <b>2022</b> , 49,	4.9	2
10	How does varying water supply affect oxygen isotope variations in needles and tree rings of Scots pine?. <i>Tree Physiology</i> , <b>2020</b> , 40, 1366-1380	4.2	1
9	Nitrate and ammonium differ in their impact on $\delta^{13}\text{C}$ of plant metabolites and respired CO from tobacco leaves. <i>Isotopes in Environmental and Health Studies</i> , <b>2021</b> , 57, 11-34	1.5	1
8	Effects of soil moisture, needle age and leaf morphology on carbon and oxygen uptake, incorporation and allocation: a dual labeling approach with $^{13}\text{CO}_2$ and $\text{H}_2^{18}\text{O}$ in foliage of a coniferous forest. <i>Tree Physiology</i> , <b>2021</b> , 41, 50-62	4.2	1
7	Limits and Strengths of Tree-Ring Stable Isotopes. <i>Tree Physiology</i> , <b>2022</b> , 399-428		1
6	Effect of nitrogen deposition on centennial forest water-use efficiency. <i>Environmental Research Letters</i> ,	6.2	0
5	Fire as a Major Factor in Dynamics of Tree-Growth and Stable $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ Variations in Larch in the Permafrost Zone. <i>Forests</i> , <b>2022</b> , 13, 725	2.8	0
4	Modern aridity in the Altai-Sayan mountain range derived from multiple millennial proxies.. <i>Scientific Reports</i> , <b>2022</b> , 12, 7752	4.9	0
3	Probing Tree Physiology Using the Dual-Isotope Approach. <i>Tree Physiology</i> , <b>2022</b> , 463-479		0
2	Nitrogen Isotopes in Tree Rings—Challenges and Prospects. <i>Tree Physiology</i> , <b>2022</b> , 361-380		
1	Impact of Increasing CO <sub>2</sub> , and Air Pollutants (NO <sub>x</sub> , SO <sub>2</sub> , O <sub>3</sub> ) on the Stable Isotope Ratios in Tree Rings. <i>Tree Physiology</i> , <b>2022</b> , 675-710		