

# Roland A Werner

## List of Publications by Year in descending order

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77  
papers

5,880  
citations

126907

33  
h-index

82547

72  
g-index

84  
all docs

84  
docs citations

84  
times ranked

5923  
citing authors

#	ARTICLE	IF	CITATIONS
1	Referencing strategies and techniques in stable isotope ratio analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2001, 15, 501-519.	1.5	802
2	Intramolecular, compound-specific, and bulk carbon isotope patterns in C 3 and C 4 plants: a review and synthesis. <i>New Phytologist</i> , 2004, 161, 371-385.	7.3	375
3	Stable isotopes in tree rings: towards a mechanistic understanding of isotope fractionation and mixing processes from the leaves to the wood. <i>Tree Physiology</i> , 2014, 34, 796-818.	3.1	359
4	Correlations between the <sup>13</sup> C Content of Primary and Secondary Plant Products in Different Cell Compartments and That in Decomposing Basidiomycetes. <i>Plant Physiology</i> , 1993, 102, 1287-1290.	4.8	341
5	Effects of charring on mass, organic carbon, and stable carbon isotope composition of wood. <i>Organic Geochemistry</i> , 2002, 33, 1207-1223.	1.8	237
6	Continuous flow <sup>2</sup> H/ <sup>1</sup> H and <sup>18</sup> O/ <sup>16</sup> O analysis of water samples with dual inlet precision. <i>Rapid Communications in Mass Spectrometry</i> , 2004, 18, 2650-2660.	1.5	234
7	ConFlo III - an interface for high precision <sup>13</sup> C and <sup>15</sup> N analysis with an extended dynamic range. , 1999, 13, 1237-1241.		207
8	On-line <sup>18</sup> O measurement of organic and inorganic substances. , 1999, 13, 1685-1693.		202
9	<sup>18</sup> O Pattern and biosynthesis of natural plant products. <i>Phytochemistry</i> , 2001, 58, 9-32.	2.9	183
10	Systematics of <sup>2</sup> H patterns in natural compounds and its importance for the elucidation of biosynthetic pathways. <i>Phytochemistry Reviews</i> , 2003, 2, 61-85.	6.5	177
11	Comprehensive inter-laboratory calibration of reference materials for <sup>18</sup> O versus VSMOW using various on-line high-temperature conversion techniques. <i>Rapid Communications in Mass Spectrometry</i> , 2009, 23, 999-1019.	1.5	167
12	The in vivo nitrogen isotope discrimination among organic plant compounds. <i>Phytochemistry</i> , 2002, 61, 465-484.	2.9	150
13	Temporal dynamics of the carbon isotope composition in a <i>Pinus sylvestris</i> stand: from newly assimilated organic carbon to respired carbon dioxide. <i>Oecologia</i> , 2008, 156, 737-750.	2.0	140
14	Short-term variations in <sup>13</sup> C of ecosystem respiration reveals link between assimilation and respiration in a deciduous forest. <i>Oecologia</i> , 2005, 142, 70-82.	2.0	130
15	Organic Reference Materials for Hydrogen, Carbon, and Nitrogen Stable Isotope-Ratio Measurements: Caffeines, <i>n</i> -Alkanes, Fatty Acid Methyl Esters, Glycines, <i>l</i> -Valines, Polyethylenes, and Oils. <i>Analytical Chemistry</i> , 2016, 88, 4294-4302.	6.5	126
16	A Possible Prebiotic Formation of Ammonia from Dinitrogen on Iron Sulfide Surfaces. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 1540-1543.	13.8	121
17	On-line determination of <sup>18</sup> O values of organic substances. <i>Analytica Chimica Acta</i> , 1996, 319, 159-164.	5.4	106
18	Symbiont identity matters: carbon and phosphorus fluxes between <i>Medicago truncatula</i> and different arbuscular mycorrhizal fungi. <i>Mycorrhiza</i> , 2011, 21, 689-702.	2.8	102

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19	Is the isotopic composition of nitrous oxide an indicator for its origin from nitrification or denitrification? A theoretical approach from referred data and microbiological and enzyme kinetic aspects. <i>Rapid Communications in Mass Spectrometry</i> , 2004, 18, 2036-2040.	1.5	94
20	High precision and continuous field measurements of $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ in carbon dioxide with a cryogen-free QCLAS. <i>Applied Physics B: Lasers and Optics</i> , 2008, 92, 451.	2.2	87
21	$\delta^{2}\text{H}$ fractionations during the biosynthesis of carbohydrates and lipids imprint a metabolic signal on the $\delta^2\text{H}$ values of plant organic compounds. <i>New Phytologist</i> , 2018, 218, 479-491.	7.3	78
22	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> , 2009, 23, 2476-2488.	1.5	76
23	Biosynthesis of gallic acid in <i>Rhus typhina</i> : discrimination between alternative pathways from natural oxygen isotope abundance. <i>Phytochemistry</i> , 2004, 65, 2809-2813.	2.9	75
24	Allocation dynamics of recently fixed carbon in beech saplings in response to increased temperatures and drought. <i>Tree Physiology</i> , 2015, 35, 585-598.	3.1	73
25	Multi-factorial <i>in vivo</i> stable isotope fractionation: causes, correlations, consequences and applications. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 155-199.	1.0	69
26	Improved precision of coupled $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ measurements from single samples using an elemental analyzer/isotope ratio mass spectrometer combination with a post-column six-port valve and selective $\text{CO}_2$ trapping; improved halide robustness of the combustion reactor using $\text{CeO}_2$ . <i>Rapid Communications in Mass Spectrometry</i> , 2003, 17, 1924-1926.	1.5	61
27	The Online $^{18}\text{O}/^{16}\text{O}$ Analysis: Development and application. <i>Isotopes in Environmental and Health Studies</i> , 2003, 39, 85-104.	1.0	60
28	Tracing fresh assimilates through <i>Larix decidua</i> exposed to elevated $\text{CO}_2$ and soil warming at the alpine treeline using compound-specific stable isotope analysis. <i>New Phytologist</i> , 2013, 197, 838-849.	7.3	55
29	Extraction of $\text{CO}_2$ from air samples for isotopic analysis and limits to ultra high precision $\delta^{18}\text{O}$ determination in $\text{CO}_2$ gas. <i>Rapid Communications in Mass Spectrometry</i> , 2001, 15, 2152-2167.	1.5	54
30	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
31	Pythons metabolize prey to fuel the response to feeding. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2004, 271, 903-908.	2.6	44
32	Metabolic fluxes, carbon isotope fractionation and respiration – lessons to be learned from plant biochemistry. <i>New Phytologist</i> , 2011, 191, 10-15.	7.3	44
33	Continuous field measurements of $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ in $\text{CO}_2$ and trace gases by FTIR spectroscopy. <i>Isotopes in Environmental and Health Studies</i> , 2008, 44, 241-251.	1.0	36
34	Absence of oxygen isotope fractionation/exchange of (hemi-) cellulose derived sugars during litter decomposition. <i>Organic Geochemistry</i> , 2012, 42, 1470-1475.	1.8	36
35	Effects of combined ozone and nitrogen deposition on the in situ properties of eleven key plant species of a subalpine pasture. <i>Oecologia</i> , 2009, 158, 747-756.	2.0	35
36	Kel-Fâ„¢ discs improve storage time of canopy air samples in 10-mL vials for $\text{CO}_2$ - $\delta^{13}\text{C}$ analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2004, 18, 1663-1665.	1.5	34

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37	Drought alters the carbon footprint of trees in soils—tracking the spatio-temporal fate of <sup>13</sup> C-labelled assimilates in the soil of an old-growth pine forest. <i>Global Change Biology</i> , 2021, 27, 2491-2506.	9.5	32
38	Standardization for oxygen isotope ratio measurement - still an unsolved problem. , 1999, 13, 1248-1251.		30
39	Oxygen isotopic signature of CO <sub>2</sub> from combustion processes. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1473-1490.	4.9	30
40	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> , 2015, 66, 5769-5781.	4.8	29
41	2H-enrichment of cellulose and n-alkanes in heterotrophic plants. <i>Oecologia</i> , 2019, 189, 365-373.	2.0	29
42	A trace-gas climatology above Zotino, central Siberia. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2002, 54, 749-767.	1.6	28
43	The relationship between needle sugar carbon isotope ratios and tree rings of larch in Siberia. <i>Tree Physiology</i> , 2015, 35, tpv096.	3.1	27
44	Optimization of automated gas sample collection and isotope ratio mass spectrometric analysis of <sup>13</sup> C of CO <sub>2</sub> in air. <i>Rapid Communications in Mass Spectrometry</i> , 2008, 22, 3883-3892.	1.5	26
45	Soil and canopy CO <sub>2</sub> , 13CO <sub>2</sub> , H <sub>2</sub> O and sensible heat flux partitions in a forest canopy inferred from concentration measurements. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2002, 54, 655-676.	1.6	25
46	The $\delta^{18}\text{O}$ -value of the p-OH group of L-tyrosine permits the assignment of its origin to plant or animal sources. <i>European Food Research and Technology</i> , 2002, 215, 55-58.	3.3	23
47	High-precision $\delta^{13}\text{C}$ analysis by FTIR spectroscopy using a novel calibration strategy. <i>Journal of Molecular Structure</i> , 2007, 834-836, 95-101.	3.6	23
48	A trace-gas climatology above Zotino, central Siberia. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 54, 749.	1.6	21
49	Long term changes in the distribution and $\delta^{15}\text{N}$ values of individual soil amino acids in the absence of plant and fertiliser inputs. <i>Isotopes in Environmental and Health Studies</i> , 2004, 40, 243-256.	1.0	21
50	A high-temperature water vapor equilibration method to determine non-exchangeable hydrogen isotope ratios of sugar, starch and cellulose. <i>Plant, Cell and Environment</i> , 2022, 45, 12-22.	5.7	21
51	Fuel switching and energy partitioning during the postprandial metabolic response in the ball python ( <i>Python regius</i> ). <i>Journal of Experimental Biology</i> , 2010, 213, 1266-1271.	1.7	19
52	Diel variations in carbon isotopic composition and concentration of organic acids and their impact on plant dark respiration in different species. <i>Plant Biology</i> , 2016, 18, 776-784.	3.8	18
53	Invasive knotweed has greater nitrogen-use efficiency than native plants: evidence from a $^{15}\text{N}$ pulse-chasing experiment. <i>Oecologia</i> , 2019, 191, 389-396.	2.0	18
54	The prediction of isotopic patterns in phenylpropanoids from their precursors and the mechanism of the NIH-shift: Basis of the isotopic characteristics of natural aromatic compounds. <i>Phytochemistry</i> , 2006, 67, 1094-1103.	2.9	17

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55	Reassessment of the $\text{NH}_4/\text{NO}_3$ thermal decomposition technique for calibration of the $\text{N}_2/\text{O}$ isotopic composition. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 2487-2496.	1.5	17
56	Influence of starch deficiency on photosynthetic and post-photosynthetic carbon isotope fractionations. <i>Journal of Experimental Botany</i> , 2019, 70, 1829-1841.	4.8	17
57	Does fog chemistry in Switzerland change with altitude?. <i>Atmospheric Research</i> , 2015, 151, 31-44.	4.1	16
58	Eine mögliche präbiotische Bildung von Ammoniak aus molekularem Stickstoff auf Eisensulfidoberflächen. <i>Angewandte Chemie</i> , 2003, 115, 1579-1581.	2.0	15
59	Metabolic Fate of the Carboxyl Groups of Malate and Pyruvate and their Influence on $\delta^{13}\text{C}$ of Leaf-Respired $\text{CO}_2$ during Light Enhanced Dark Respiration. <i>Frontiers in Plant Science</i> , 2016, 7, 739.	3.6	15
60	Multi element (C, H, O) stable isotope analysis for the authentication of balsamic vinegars. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 58-67.	1.0	14
61	Rethinking temperature effects on leaf growth, gene expression and metabolism: Diel variation matters. <i>Plant, Cell and Environment</i> , 2021, 44, 2262-2276.	5.7	14
62	The soil organic carbon stabilization potential of old and new wheat cultivars: a $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ labeling study. <i>Biogeosciences</i> , 2020, 17, 2971-2986.	3.3	13
63	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> , 2013, 49, 492-502.	1.0	12
64	Tracing $\text{N}_2\text{O}$ formation in full-scale wastewater treatment with natural abundance isotopes indicates control by organic substrate and process settings. <i>Water Research X</i> , 2022, 15, 100130.	6.1	12
65	Measurement of oxygen isotope ratios ( $\delta^{18}\text{O}/\delta^{16}\text{O}$ ) of aqueous $\text{O}_2$ in small samples by gas chromatography/isotope ratio mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 684-690.	1.5	11
66	MiniCASCC – A battery driven fog collector for ecosystem research. <i>Atmospheric Research</i> , 2013, 128, 24-34.	4.1	10
67	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
68	Temporal evolution of stable water isotopologues in cloud droplets in a hill cap cloud in central Europe (HCCT-2010). <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 11679-11694.	4.9	9
69	Changes in $\delta^{13}\text{C}$ of dark respired $\text{CO}_2$ and organic matter of different organs during early ontogeny in peanut plants. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 93-108.	1.0	9
70	Seasonality, drivers, and isotopic composition of soil $\text{CO}_2$ fluxes from tropical forests of the Congo Basin. <i>Biogeosciences</i> , 2020, 17, 6207-6218.	3.3	6
71	Assessment of Enzymatic Methods in the $\delta^{18}\text{O}$ Value Determination of the $\alpha$ -Tyrosine $\beta$ -Hydroxy Group for Proof of Illegal Meat and Bone Meal Feeding to Cattle. <i>Journal of Agricultural and Food Chemistry</i> , 2011, 59, 9475-9483.	5.2	5
72	Soil and canopy $\text{CO}_2$ , $^{13}\text{CO}_2$ , $\text{H}_2\text{O}$ and sensible heat flux partitions in a forest canopy inferred from concentration measurements. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2002, 54, 655-676.	1.6	4

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73	Nitrate and ammonium differ in their impact on $\delta^{13}\text{C}$ of plant metabolites and respired $\text{CO}_2$ from tobacco leaves. <i>Isotopes in Environmental and Health Studies</i> , 2021, 57, 11-34.	1.0	4
74	Stable water isotopologue ratios in fog and cloud droplets of liquid clouds are not size-dependent. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 9855-9863.	4.9	3
75	Special Issue dedicated to Professor Hanns-Ludwig Schmidt on the occasion of his 85th birthday. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 1-6.	1.0	3
76	Measurement precision and accuracy of high artificial enrichment $^{15}\text{N}$ and $^{13}\text{C}$ tracer samples. <i>Rapid Communications in Mass Spectrometry</i> , 2019, 33, 1153-1163.	1.5	1
77	The in vivo Nitrogen Isotope Discrimination Among Organic Plant Compounds.. <i>ChemInform</i> , 2003, 34, no.	0.0	0