

Michael Zech

List of Publications by Year in descending order

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Version: 2024-02-01

78
papers

2,593
citations

159525

30
h-index

206029

48
g-index

82
all docs

82
docs citations

82
times ranked

2190
citing authors

#	ARTICLE	IF	CITATIONS
1	The Holocene lake-evaporation history of the afro-alpine Lake Garba Guracha in the Bale Mountains, Ethiopia, based on $\delta^{18}O$ records of sugar biomarker and diatoms. <i>Quaternary Research</i> , 2022, 105, 23-36.	1.0	5
2	Variability in pattern and hydrogen isotope composition (δ^2H) of long-chain n-alkanes of surface soils and its relations to climate and vegetation characteristics: A meta-analysis. <i>Pedosphere</i> , 2022, 32, 369-380.	2.1	2
3	Precipitation and Lake Water Evaporation Recorded by Terrestrial and Aquatic $\delta^{13}C$ Alkane $\delta^{2}H$ Isotopes in Lake Khar Nuur, Mongolia. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	3
4	Climate, vegetation and fire history during the past 18,000 years, recorded in high altitude lacustrine sediments on the Sanetti Plateau, Bale Mountains (Ethiopia). <i>Progress in Earth and Planetary Science</i> , 2022, 9, .	1.1	4
5	Central Mongolian lake sediments reveal new insights on climate change and equestrian empires in the Eastern Steppes. <i>Scientific Reports</i> , 2022, 12, 2829.	1.6	9
6	$\delta^{18}O$ analyses of bulk lipids as novel paleoclimate tool in loess research – a pilot study. <i>E&G Quaternary Science Journal</i> , 2022, 71, 83-90.	0.2	1
7	Holocene vegetation reconstruction in the forest-steppe of Mongolia based on leaf waxes and macro-charcoals in soils. <i>E&G Quaternary Science Journal</i> , 2022, 71, 91-110.	0.2	0
8	Middle to Late Pleistocene environments based on stable organic carbon and nitrogen isotopes of loess-palaeosol sequences from the Carpathian Basin. <i>Boreas</i> , 2021, 50, 184-204.	1.2	11
9	$\delta^{13}C$ -alkane and $\delta^{18}O$ -sugar biomarker proxies from leaves and topsoils of the Bale Mountains, Ethiopia, and implications for paleoclimate reconstructions. <i>Biogeochemistry</i> , 2021, 153, 135-153.	1.7	8
10	Revisiting the subalpine Mesolithic site Ullafelsen in the Fotsch Valley, Stubai Alps, Austria – new insights into pedogenesis and landscape evolution from leaf-wax-derived $\delta^{13}C$ -alkanes, black carbon and radiocarbon dating. <i>E&G Quaternary Science Journal</i> , 2021, 70, 171-186.	0.2	4
11	Editorial: <i>E&G Quaternary Science Journal</i> – almost 70 years and going stronger than ever. <i>E&G Quaternary Science Journal</i> , 2021, 69, 261-262.	0.2	0
12	Validation of a coupled $\delta^{18}O$ and δ^2H paleohygrometer approach based on a climate chamber experiment. <i>Biogeosciences</i> , 2021, 18, 5363-5380.	1.8	18
13	Leaf Waxes and Hemicelluloses in Topsoils Reflect the δ^2H and $\delta^{18}O$ Isotopic Composition of Precipitation in Mongolia. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	11
14	The potential of δ^2H -alkanes and $\delta^{18}O$ -sugar for paleoclimate reconstruction – A regional calibration study for South Africa. <i>Science of the Total Environment</i> , 2020, 716, 137045.	3.9	19
15	Evaluation of bacterial glycerol dialkyl glycerol tetraether and $\delta^{18}O$ biomarker proxies along a central European topsoil transect. <i>Biogeosciences</i> , 2020, 17, 741-756.	1.3	18
16	Spatial and temporal δ^2H and $\delta^{18}O$ isotope variation of contemporary precipitation in the Bale Mountains, Ethiopia. <i>Isotopes in Environmental and Health Studies</i> , 2020, 56, 122-135.	0.5	17
17	Editorial: <i>E&G Quaternary Science Journal</i> – a community-based open-access journal. <i>E&G Quaternary Science Journal</i> , 2020, 68, 243-244.	0.2	0
18	Long-term fire resilience of the Ericaceous Belt, Bale Mountains, Ethiopia. <i>Biology Letters</i> , 2019, 15, 20190357.	1.0	26

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19	First Calibration and Application of Leaf Wax n-Alkane Biomarkers in Loess-Paleosol Sequences and Modern Plants and Soils in Armenia. <i>Geosciences (Switzerland)</i> , 2019, 9, 263.	1.0	18
20	Phenolic Compounds as Unambiguous Chemical Markers for the Identification of Keystone Plant Species in the Bale Mountains, Ethiopia. <i>Plants</i> , 2019, 8, 228.	1.6	6
21	Sauna, sweat and science II “do we sweat what we drink?”. <i>Isotopes in Environmental and Health Studies</i> , 2019, 55, 394-403.	0.5	1
22	Record of Late Holocene Human Occupations in Coastal Deposits of the Middle Uruguay River. <i>The Latin American Studies Book Series</i> , 2019, , 131-156.	0.1	2
23	How dry was the Younger Dryas? Evidence from a coupled $\delta^{13}C$ and $\delta^{18}O$ biomarker paleohygrometer applied to the Gemünden Maar sediments, Western Eifel, Germany. <i>Climate of the Past</i> , 2019, 15, 713-733.	1.3	24
24	Chemotaxonomic patterns of vegetation and soils along altitudinal transects of the Bale Mountains, Ethiopia, and implications for paleovegetation reconstructions “Part I: stable isotopes and sugar biomarkers. <i>E&G Quaternary Science Journal</i> , 2019, 68, 177-188.	0.2	8
25	Chemotaxonomic patterns of vegetation and soils along altitudinal transects of the Bale Mountains, Ethiopia, and implications for paleovegetation reconstructions “Part II: lignin-derived phenols and leaf-wax-derived n -alkanes. <i>E&G Quaternary Science Journal</i> , 2019, 68, 189-200.	0.2	11
26	Application of natural wax markers in equine nutrition studies “current state, limitations and perspectives. <i>Livestock Science</i> , 2018, 208, 77-89.	0.6	5
27	The Crvenka loess-paleosol sequence: A record of continuous grassland domination in the southern Carpathian Basin during the Late Pleistocene. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2018, 509, 33-46.	1.0	38
28	Approaches and challenges to the study of loess “Introduction to the LoessFest Special Issue. <i>Quaternary Research</i> , 2018, 89, 563-618.	1.0	92
29	Lipid biomarkers in aeolian sediments under desert pavements “potential and first results from the Black Rock Desert, Utah, USA, and Fuerteventura, Canary Islands, Spain. <i>E&G Quaternary Science Journal</i> , 2018, 66, 103-108.	0.2	4
30	Comparative ^{14}C and OSL dating of loess-paleosol sequences to evaluate post-depositional contamination of n -alkane biomarkers. <i>Quaternary Research</i> , 2017, 87, 180-189.	1.0	20
31	Late Quaternary relative humidity changes from Mt. Kilimanjaro, based on a coupled $2H-18O$ biomarker paleohygrometer approach. <i>Quaternary International</i> , 2017, 438, 116-130.	0.7	21
32	Leaf waxes in litter and topsoils along a European transect. <i>Soil</i> , 2016, 2, 551-564.	2.2	60
33	A sugar biomarker proxy for assessing terrestrial versus aquatic sedimentary input. <i>Organic Geochemistry</i> , 2016, 98, 98-104.	0.9	16
34	A novel methylation derivatization method for ^{18}O analysis of individual carbohydrates by gas chromatography/pyrolysis “isotope ratio mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 221-229.	0.7	10
35	The ELSA-Vegetation-Stack: Reconstruction of Landscape Evolution Zones (LEZ) from laminated Eifel maar sediments of the last 60,000 years. <i>Global and Planetary Change</i> , 2016, 142, 108-135.	1.6	85
36	Two possible source regions for central Greenland last glacial dust. <i>Geophysical Research Letters</i> , 2015, 42, 10,399.	1.5	39

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37	Coupling $\delta^2\text{H}$ and $\delta^{18}\text{O}$ biomarker results yields information on relative humidity and isotopic composition of precipitation – a climate transect validation study. <i>Biogeosciences</i> , 2015, 12, 3913-3924.	1.3	34
38	Danube loess stratigraphy – Towards a pan-European loess stratigraphic model. <i>Earth-Science Reviews</i> , 2015, 148, 228-258.	4.0	241
39	Do $\delta^2\text{H}$ -alkane biomarkers in soils/sediments reflect the $\delta^2\text{H}$ isotopic composition of precipitation? A case study from Mt. Kilimanjaro and implications for paleoaltimetry and paleoclimate research. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 508-524.	0.5	26
40	New frontiers in the molecular based reconstruction of Quaternary paleovegetation from loess and paleosols. <i>Quaternary International</i> , 2015, 372, 180-187.	0.7	9
41	Sauna, sweat and science – quantifying the proportion of condensation water versus sweat using a stable water isotope ($2\text{H}/1\text{H}$ and $18\text{O}/16\text{O}$) tracer experiment. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 439-447.	0.5	5
42	Stable hydrogen and carbon isotope ratios of methoxyl groups during plant litter degradation. <i>Isotopes in Environmental and Health Studies</i> , 2015, 51, 143-154.	0.5	17
43	Reconstructing lake evaporation history and the isotopic composition of precipitation by a coupled $\delta^{18}\text{O}$ - $\delta^2\text{H}$ biomarker approach. <i>Journal of Hydrology</i> , 2015, 529, 622-631.	2.3	29
44	On the stratigraphic integrity of leaf-wax biomarkers in loess paleosols. <i>Biogeosciences</i> , 2014, 11, 2455-2463.	1.3	31
45	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.	1.6	33
46	Buried black soils on the slopes of Mt. Kilimanjaro as a regional carbon storage hotspot. <i>Catena</i> , 2014, 112, 125-130.	2.2	40
47	Oxygen isotope ratios ($18\text{O}/16\text{O}$) of hemicellulose-derived sugar biomarkers in plants, soils and sediments as paleoclimate proxy I: Insight from a climate chamber experiment. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 126, 614-623.	1.6	43
48	A 16-ka $\delta^{18}\text{O}$ record of lacustrine sugar biomarkers from the High Himalaya reflects Indian Summer Monsoon variability. <i>Journal of Paleolimnology</i> , 2014, 51, 241-251.	0.8	23
49	Reply to the comment of Sternberg on – Zech et al. (2014) Oxygen isotope ratios ($18\text{O}/16\text{O}$) of hemicellulose-derived sugar biomarkers in plants, soils and sediments as paleoclimate proxy I: Insight from a climate chamber experiment. <i>GCA</i> 126, 614 – 623. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 141, 680-682.	1.6	8
50	Humid glacial, arid interglacials? Critical thoughts on pedogenesis and paleoclimate based on multi-proxy analyses of the loess – paleosol sequence Crvenka, Northern Serbia. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2013, 387, 165-175.	1.0	102
51	Stable isotope ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, $\delta^{18}\text{O}$) record of soils in Buryatia, southern Siberia: Implications for biogeochemical and paleoclimatic interpretations. <i>Quaternary International</i> , 2013, 290-291, 82-94.	0.7	25
52	Last glacial vegetation reconstructions in the extreme-continental eastern Asia: Potentials of pollen and n-alkane biomarker analyses. <i>Quaternary International</i> , 2013, 290-291, 253-263.	0.7	52
53	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.	0.5	12
54	A 220ka terrestrial $\delta^{18}\text{O}$ and deuterium excess biomarker record from an eolian permafrost paleosol sequence, NE-Siberia. <i>Chemical Geology</i> , 2013, 360-361, 220-230.	1.4	41

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55	Incorrect when uncorrected: Reconstructing vegetation history using n-alkane biomarkers in loess-paleosol sequences – A case study from the Saxonian loess region, Germany. <i>Quaternary International</i> , 2013, 296, 108-116.	0.7	69
56	Reconstruction of the late Quaternary paleoenvironments of the Nussloch loess paleosol – Response to comments by G. Wiesenberg and M. Gocke. <i>Quaternary Research</i> , 2013, 79, 306-307.	1.0	3
57	Natural abundance of ¹⁸ O of sugar biomarkers in topsoils along a climate transect over the Central Scandinavian Mountains, Norway. <i>Journal of Plant Nutrition and Soil Science</i> , 2013, 176, 12-15.	1.1	8
58	Reconstruction of the late Quaternary paleoenvironments of the Nussloch loess paleosol sequence, Germany, using n-alkane biomarkers. <i>Quaternary Research</i> , 2012, 78, 226-235.	1.0	65
59	Absence of oxygen isotope fractionation/exchange of (hemi-) cellulose derived sugars during litter decomposition. <i>Organic Geochemistry</i> , 2012, 42, 1470-1475.	0.9	36
60	Effect of leaf litter degradation and seasonality on D/H isotope ratios of n-alkane biomarkers. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 4917-4928.	1.6	87
61	Obliquity forcing of Quaternary glaciation and environmental changes in NE Siberia. <i>Quaternary International</i> , 2011, 234, 133-145.	0.7	21
62	The late Quaternary loess record of Tokaj, Hungary: Reconstructing palaeoenvironment, vegetation and climate using stable C and N isotopes and biomarkers. <i>Quaternary International</i> , 2011, 240, 52-61.	0.7	74
63	Late Quaternary soil genesis and vegetation history on the northern slopes of Mt. Kilimanjaro, East Africa. <i>Quaternary International</i> , 2011, 243, 327-336.	0.7	19
64	Dust deposition and climate in the Carpathian Basin over an independently dated last glacial-interglacial cycle. <i>Quaternary Science Reviews</i> , 2011, 30, 662-681.	1.4	214
65	High carbon sequestration in Siberian permafrost loess-paleosols during glacials. <i>Climate of the Past</i> , 2011, 7, 501-509.	1.3	38
66	Human and climate impact on ¹⁵ N natural abundance of plants and soils in high-mountain ecosystems: a short review and two examples from the Eastern Pamirs and Mt. Kilimanjaro. <i>Isotopes in Environmental and Health Studies</i> , 2011, 47, 286-296.	0.5	32
67	Novel methodological approaches in loess research – interrogating biomarkers and compound-specific stable isotopes. <i>E&G Quaternary Science Journal</i> , 2011, 60, 170-187.	0.2	17
68	A 12.5 kyr history of vegetation dynamics and mire development with evidence of Younger Dryas larch presence in the Verkhojansk Mountains, East Siberia, Russia. <i>Boreas</i> , 2010, 39, 56-68.	1.2	27
69	Quaternary vegetation changes derived from a loess-like permafrost palaeosol sequence in northeast Siberia using alkane biomarker and pollen analyses. <i>Boreas</i> , 2010, 39, 540-550.	1.2	54
70	Reconstructing Quaternary vegetation history in the Carpathian Basin, SE-Europe, using n-alkane biomarkers as molecular fossils: Problems and possible solutions, potential and limitations. <i>E&G Quaternary Science Journal</i> , 2010, 58, 148-155.	0.2	53
71	Compound-specific ¹⁸ O analyses of neutral sugars in soils using gas chromatography-pyrolysis isotope ratio mass spectrometry: problems, possible solutions and a first application. <i>Rapid Communications in Mass Spectrometry</i> , 2009, 23, 3522-3532.	0.7	47
72	Late Quaternary palaeosol records from subtropical (38°S) to tropical (16°S) South America and palaeoclimatic implications. <i>Quaternary International</i> , 2009, 196, 107-120.	0.7	32

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73	Late Quaternary environmental changes in Misiones, subtropical NE Argentina, deduced from multi-proxy geochemical analyses in a palaeosol-sediment sequence. <i>Quaternary International</i> , 2009, 196, 121-136.	0.7	47
74	Deglaciation and landscape history around Annapurna, Nepal, based on ¹⁰ Be surface exposure dating. <i>Quaternary Science Reviews</i> , 2009, 28, 1106-1118.	1.4	75
75	Improved compound-specific ¹³ C analysis of n-alkanes for application in palaeoenvironmental studies. <i>Rapid Communications in Mass Spectrometry</i> , 2008, 22, 135-142.	0.7	49
76	Characterisation and palaeoclimate of a loess-like permafrost palaeosol sequence in NE Siberia. <i>Geoderma</i> , 2008, 143, 281-295.	2.3	52
77	A 240,000-year stable carbon and nitrogen isotope record from a loess-like palaeosol sequence in the Tumara Valley, Northeast Siberia. <i>Chemical Geology</i> , 2007, 242, 307-318.	1.4	49
78	Evidence for Late Pleistocene climate changes from buried soils on the southern slopes of Mt. Kilimanjaro, Tanzania. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2006, 242, 303-312.	1.0	49