Michael Zech

List of Publications by Year
in descending order

78	2,593	159585 30	206112 48
papers	citations	h-index	g-index

82	82	82	2190
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Danube loess stratigraphy â€" Towards a pan-European loess stratigraphic model. Earth-Science Reviews, 2015, 148, 228-258.	9.1	241
2	Dust deposition and climate in the Carpathian Basin over an independently dated last glacialâ€"interglacial cycle. Quaternary Science Reviews, 2011, 30, 662-681.	3.0	214
3	Humid glacials, arid interglacials? Critical thoughts on pedogenesis and paleoclimate based on multi-proxy analyses of the loessâ€"paleosol sequence Crvenka, Northern Serbia. Palaeogeography, Palaeoclimatology, Palaeoecology, 2013, 387, 165-175.	2.3	102
4	Approaches and challenges to the study of loessâ€"Introduction to the LoessFest Special Issue. Quaternary Research, 2018, 89, 563-618.	1.7	92
5	Effect of leaf litter degradation and seasonality on D/H isotope ratios of n-alkane biomarkers. Geochimica Et Cosmochimica Acta, 2011, 75, 4917-4928.	3.9	87
6	The ELSA-Vegetation-Stack: Reconstruction of Landscape Evolution Zones (LEZ) from laminated Eifel maar sediments of the last 60,000 years. Global and Planetary Change, 2016, 142, 108-135.	3.5	85
7	Deglaciation and landscape history around Annapurna, Nepal, based on 10Be surface exposure dating. Quaternary Science Reviews, 2009, 28, 1106-1118.	3.0	75
8	The late Quaternary loess record of Tokaj, Hungary: Reconstructing palaeoenvironment, vegetation and climate using stable C and N isotopes and biomarkers. Quaternary International, 2011, 240, 52-61.	1.5	74
9	Incorrect when uncorrected: Reconstructing vegetation history using n-alkane biomarkers in loess-paleosol sequences â€" A case study from the Saxonian loess region, Germany. Quaternary International, 2013, 296, 108-116.	1.5	69
10	Reconstruction of the late Quaternary paleoenvironments of the Nussloch loess paleosol sequence, Germany, using n-alkane biomarkers. Quaternary Research, 2012, 78, 226-235.	1.7	65
11	Leaf waxes in litter and topsoils along a European transect. Soil, 2016, 2, 551-564.	4.9	60
12	Quaternary vegetation changes derived from a loessâ€like permafrost palaeosol sequence in northeast Siberia using alkane biomarker and pollen analyses. Boreas, 2010, 39, 540-550.	2.4	54
13	Reconstructing Quaternary vegetation history in the Carpathian Basin, SE-Europe, using n-alkane biomarkers as molecular fossils: Problems and possible solutions, potential and limitations. E&G Quaternary Science Journal, 2010, 58, 148-155.	0.7	53
14	Characterisation and palaeoclimate of a loess-like permafrost palaeosol sequence in NE Siberia. Geoderma, 2008, 143, 281-295.	5.1	52
15	Last glacial vegetation reconstructions in the extreme-continental eastern Asia: Potentials of pollen and n-alkane biomarker analyses. Quaternary International, 2013, 290-291, 253-263.	1.5	52
16	Evidence for Late Pleistocene climate changes from buried soils on the southern slopes of Mt. Kilimanjaro, Tanzania. Palaeogeography, Palaeoclimatology, Palaeoecology, 2006, 242, 303-312.	2.3	49
17	A 240,000-year stable carbon and nitrogen isotope record from a loess-like palaeosol sequence in the Tumara Valley, Northeast Siberia. Chemical Geology, 2007, 242, 307-318.	3.3	49
18	Improved compoundâ€specific Î´¹³C analysis of nâ€alkanes for application in palaeoenvironmental studies. Rapid Communications in Mass Spectrometry, 2008, 22, 135-142.	1.5	49

#	Article	IF	Citations
19	Compoundâ€specific Î´¹⁸O analyses of neutral sugars in soils using gas chromatographyâ€“pyrolysisâ€“isotope ratio mass spectrometry: problems, possible solutions and a first application. Rapid Communications in Mass Spectrometry, 2009, 23, 3522-3532.	1.5	47
20	Late Quaternary environmental changes in Misiones, subtropical NE Argentina, deduced from multi-proxy geochemical analyses in a palaeosol-sediment sequence. Quaternary International, 2009, 196, 121-136.	1.5	47
21	Oxygen isotope ratios (18O/16O) of hemicellulose-derived sugar biomarkers in plants, soils and sediments as paleoclimate proxy I: Insight from a climate chamber experiment. Geochimica Et Cosmochimica Acta, 2014, 126, 614-623.	3.9	43
22	A 220ka terrestrial Î´18O and deuterium excess biomarker record from an eolian permafrost paleosol sequence, NE-Siberia. Chemical Geology, 2013, 360-361, 220-230.	3.3	41
23	Buried black soils on the slopes of Mt. Kilimanjaro as a regional carbon storage hotspot. Catena, 2014, 112, 125-130.	5.0	40
24	Two possible source regions for central Greenland last glacial dust. Geophysical Research Letters, 2015, 42, 10,399.	4.0	39
25	High carbon sequestration in Siberian permafrost loess-paleosols during glacials. Climate of the Past, 2011, 7, 501-509.	3.4	38
26	The Crvenka loess-paleosol sequence: A record of continuous grassland domination in the southern Carpathian Basin during the Late Pleistocene. Palaeogeography, Palaeoclimatology, Palaeoecology, 2018, 509, 33-46.	2.3	38
27	Absence of oxygen isotope fractionation/exchange of (hemi-) cellulose derived sugars during litter decomposition. Organic Geochemistry, 2012, 42, 1470-1475.	1.8	36
28	Coupling Î´²H and Î´¹⁸O biomarker results yields information on relative humidity and isotopic composition of precipitation â€“ a climate transect validation study. Biogeosciences, 2015, 12, 3913-3924.	3.3	34
29	Oxygen isotope ratios (18O/16O) of hemicellulose-derived sugar biomarkers in plants, soils and sediments as paleoclimate proxy II: Insight from a climate transect study. Geochimica Et Cosmochimica Acta, 2014, 126, 624-634.	3.9	33
30	Late Quaternary palaeosol records from subtropical (38Â°S) to tropical (16Â°S) South America and palaeoclimatic implications. Quaternary International, 2009, 196, 107-120.	1.5	32
31	Human and climate impact on¹⁵N natural abundance of plants and soils in high-mountain ecosystems: a short review and two examples from the Eastern Pamirs and Mt. Kilimanjaro. Isotopes in Environmental and Health Studies, 2011, 47, 286-296.	1.0	32
32	On the stratigraphic integrity of leaf-wax biomarkers in loess paleosols. Biogeosciences, 2014, 11, 2455-2463.	3.3	31
33	Reconstructing lake evaporation history and the isotopic composition of precipitation by a coupled Î´18Oâ€“Î´2H biomarker approach. Journal of Hydrology, 2015, 529, 622-631.	5.4	29
34	A 12.5â€kyr history of vegetation dynamics and mire development with evidence of Younger Dryas larch presence in the Verkhoyansk Mountains, East Siberia, Russia. Boreas, 2010, 39, 56-68.	2.4	27
35	Don-alkane biomarkers in soils/sediments reflect theÎ´²H isotopic composition of precipitation? A case study from Mt. Kilimanjaro and implications for paleoaltimetry and paleoclimate research. Isotopes in Environmental and Health Studies, 2015, 51, 508-524.	1.0	26
36	Long-term fire resilience of the Ericaceous Belt, Bale Mountains, Ethiopia. Biology Letters, 2019, 15, 20190357.	2.3	26

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37	Stable isotope (Î´13C, Î´15N, Î´18O) record of soils in Buryatia, southern Siberia: Implications for biogeochemical and paleoclimatic interpretations. Quaternary International, 2013, 290-291, 82-94.	1.5	25
38	How dry was the Younger Dryas? Evidence from a coupled <i>Î´</i>²Hâ€“<i>Î´</i><s biomarker paleohygrometer applied to the GemÃ¼ndener Maar sediments, Western Eifel, Germany. Climate of the Past, 2019, 15, 713-733.	3.4	24
39	A 16-ka Î´18O record of lacustrine sugar biomarkers from the High Himalaya reflects Indian Summer Monsoon variability. Journal of Paleolimnology, 2014, 51, 241-251.	1.6	23
40	Obliquity forcing of Quaternary glaciation and environmental changes in NE Siberia. Quaternary International, 2011, 234, 133-145.	1.5	21
41	Late Quaternary relative humidity changes from Mt. Kilimanjaro, based on a coupled 2H-18O biomarker paleohygrometer approach. Quaternary International, 2017, 438, 116-130.	1.5	21
42	Comparative¹⁴C and OSL dating of loess-paleosol sequences to evaluate post-depositional contamination ofn-alkane biomarkers. Quaternary Research, 2017, 87, 180-189.	1.7	20
43	Late Quaternary soil genesis and vegetation history on the northern slopes of Mt. Kilimanjaro, East Africa. Quaternary International, 2011, 243, 327-336.	1.5	19
44	The potential of Î´2H-alkanes and Î´18Osugar for paleoclimate reconstruction â€“ A regional calibration study for South Africa. Science of the Total Environment, 2020, 716, 137045.	8.0	19
45	First Calibration and Application of Leaf Wax n-Alkane Biomarkers in Loess-Paleosol Sequences and Modern Plants and Soils in Armenia. Geosciences (Switzerland), 2019, 9, 263.	2.2	18
46	Evaluation of bacterial glycerol dialkyl glycerol tetraether and ²Hâ€“¹⁸O biomarker proxies along a central European topsoil transect. Biogeosciences, 2020, 17, 741-756.	3.3	18
47	Stable hydrogen and carbon isotope ratios of methoxyl groups during plant litter degradation. Isotopes in Environmental and Health Studies, 2015, 51, 143-154.	1.0	17
48	Spatial and temporal ²H and ¹⁸O isotope variation of contemporary precipitation in the Bale Mountains, Ethiopia. Isotopes in Environmental and Health Studies, 2020, 56, 122-135.	1.0	17
49	Novel methodological approaches in loess research â€“ interrogating biomarkers and compound-specific stable isotopes. E&G Quaternary Science Journal, 2011, 60, 170-187.	0.7	17
50	A sugar biomarker proxy for assessing terrestrial versus aquatic sedimentary input. Organic Geochemistry, 2016, 98, 98-104.	1.8	16
51	A novel methodological approach for Î´¹⁸O analysis of sugars using gas chromatography-pyrolysis-isotope ratio mass spectrometry. Isotopes in Environmental and Health Studies, 2013, 49, 492-502.	1.0	12
52	Leaf Waxes and Hemicelluloses in Topsoils Reflect the Î´2H and Î´18O Isotopic Composition of Precipitation in Mongolia. Frontiers in Earth Science, 2020, 8, .	1.8	11
53	Middle to Late Pleistocene environments based on stable organic carbon and nitrogen isotopes of loessâ€palaeosol sequences from the Carpathian Basin. Boreas, 2021, 50, 184-204.	2.4	11
54	Chemotaxonomic patterns of vegetation and soils along altitudinal transects of the Bale Mountains, Ethiopia, and implications for paleovegetation reconstructions â€“ Part II: lignin-derived phenols and leaf-wax-derived <i>n</i>-alkanes. E&G Quaternary Science Journal, 2019, 68, 189-200.	0.7	11

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55	A novel methylation derivatization method for Î´¹⁸O analysis of individual carbohydrates by gas chromatography/pyrolysisâ€“isotope ratio mass spectrometry. Rapid Communications in Mass Spectrometry, 2016, 30, 221-229.	1.5	10
56	New frontiers in the molecular based reconstruction of Quaternary paleovegetation from loess and paleosols. Quaternary International, 2015, 372, 180-187.	1.5	9
57	Central Mongolian lake sediments reveal new insights on climate change and equestrian empires in the Eastern Steppes. Scientific Reports, 2022, 12, 2829.	3.3	9
58	Natural abundance of ¹⁸O of sugar biomarkers in topsoils along a climate transect over the Central Scandinavian Mountains, Norway. Journal of Plant Nutrition and Soil Science, 2013, 176, 12-15.	1.9	8
59	Reply to the comment of Sternberg on â€œZech et al. (2014) Oxygen isotope ratios (18O/16O) of hemicellulose-derived sugar biomarkers in plants, soils and sediments as paleoclimate proxy I: Insight from a climate chamber experiment. GCA 126, 614â€“623.â€• Geochimica Et Cosmochimica Acta, 2014, 141, 680-682.	3.9	8
60	Î´2Hn-alkane and Î´18Osugar biomarker proxies from leaves and topsoils of the Bale Mountains, Ethiopia, and implications for paleoclimate reconstructions. Biogeochemistry, 2021, 153, 135-153.	3.5	8
61	Chemotaxonomic patterns of vegetation and soils along altitudinal transects of the Bale Mountains, Ethiopia, and implications for paleovegetation reconstructions â€“ Part 1: stable isotopes and sugar biomarkers. E&G Quaternary Science Journal, 2019, 68, 177-188.	0.7	8
62	Phenolic Compounds as Unambiguous Chemical Markers for the Identification of Keystone Plant Species in the Bale Mountains, Ethiopia. Plants, 2019, 8, 228.	3.5	6
63	Validation of a coupled <i>Î´</i>²H<sub><><>n</ paleohygrometer approach based on a climate chamber experiment. Biogeosciences, 2021, 18, 5363-5380.	3.8	6
64	Sauna, sweat and science â€“ quantifying the proportion of condensation water versus sweat using a stable water isotope (2H/1H and 18O/16O) tracer experiment. Isotopes in Environmental and Health Studies, 2015, 51, 439-447.	1.0	5
65	Application of natural wax markers in equine nutrition studies â€“ current state, limitations and perspectives. Livestock Science, 2018, 208, 77-89.	1.6	5
66	The Holocene lake-evaporation history of the afro-alpine Lake Garba Guracha in the Bale Mountains, Ethiopia, based on Î´¹⁸O records of sugar biomarker and diatoms. Quaternary Research, 2022, 105, 23-36.	1.7	5
67	Revisiting the subalpine Mesolithic site Ullafelsen in the Fotsch Valley, Stubai Alps, Austria â€“ new insights into pedogenesis and landscape evolution from leaf-wax-derived <i>n</i>-alkanes, black carbon and radiocarbon dating. E&G Quaternary Science Journal, 2021, 70, 171-186.	0.7	4
68	Lipid biomarkers in aeolian sediments under desert pavements â€“ potential and first results from the Black Rock Desert, Utah, USA, and Fuerteventura, Canary Islands, Spain. E&G Quaternary Science Journal, 2018, 66, 103-108.	0.7	4
69	Climate, vegetation and fire history during the past 18,000Âyears, recorded in high altitude lacustrine sediments on the Sanetti Plateau, Bale Mountains (Ethiopia). Progress in Earth and Planetary Science, 2022, 9, .	3.0	4
70	Reconstruction of the late Quaternary paleoenvironments of the Nussloch loess paleosol -- Response to comments by G. Wiesenberg and M. Gocke. Quaternary Research, 2013, 79, 306-307.	1.7	3
71	Precipitation and Lake Water Evaporation Recorded by Terrestrial and Aquatic nâ€Alkane Î´²H Isotopes in Lake Khar Nuur, Mongolia. Geochemistry, Geophysics, Geosystems, 2022, 23, .	2.5	3
72	Record of Late Holocene Human Occupations in Coastal Deposits of the Middle Uruguay River. The Latin American Studies Book Series, 2019, , 131-156.	0.2	2

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73	Variability in pattern and hydrogen isotope composition (Î´2H) of long-chain n-alkanes of surface soils and its relations to climate and vegetation characteristics: A meta-analysis. Pedosphere, 2022, 32, 369-380.	4.0	2
74	Sauna, sweat and science II â€“ do we sweat what we drink?. Isotopes in Environmental and Health Studies, 2019, 55, 394-403.	1.0	1
75	¹⁸O analyses of bulk lipids as novel paleoclimate tool in loess research â€“ a pilot study. E&G Quaternary Science Journal, 2022, 71, 83-90.	0.7	1
76	Editorial: <i>E&G Quaternary Science Journal</i> â€“ almost 70 years and going stronger than ever. E&G Quaternary Science Journal, 2021, 69, 261-262.	0.7	0
77	Editorial: <i>E&G Quaternary Science Journal</i> â€“ a community-based open-access journal. E&G Quaternary Science Journal, 2020, 68, 243-244.	0.7	0
78	Holocene vegetation reconstruction in the forestâ€“steppe of Mongolia based on leaf waxes and macro-charcoals in soils. E&G Quaternary Science Journal, 2022, 71, 91-110.	0.7	0