

Timothy K Lowenstein

List of Publications by Year in descending order

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79
papers

5,255
citations

117625

34
h-index

88630

70
g-index

80
all docs

80
docs citations

80
times ranked

4124
citing authors

#	ARTICLE	IF	CITATIONS
1	Oscillations in Phanerozoic Seawater Chemistry: Evidence from Fluid Inclusions. <i>Science</i> , 2001, 294, 1086-1088.	12.6	462
2	Tropical climate changes at millennial and orbital timescales on the Bolivian Altiplano. <i>Nature</i> , 2001, 409, 698-701.	27.8	418
3	Criteria for the recognition of salt-pan evaporites. <i>Sedimentology</i> , 1985, 32, 627-644.	3.1	340
4	Secular variation in seawater chemistry and the origin of calcium chloride basinal brines. <i>Geology</i> , 2003, 31, 857.	4.4	303
5	Melting behavior of fluid inclusions in laboratory-grown halite crystals in the systems NaCl-H ₂ O, NaCl-KCl-H ₂ O, NaCl-MgCl ₂ -H ₂ O, and NaCl-CaCl ₂ -H ₂ O. <i>Geochimica Et Cosmochimica Acta</i> , 1990, 54, 591-601.	3.9	302
6	Seawater chemistry and the advent of biocalcification. <i>Geology</i> , 2004, 32, 473.	4.4	214
7	Hydrologic variation during the last 170,000 years in the southern hemisphere tropics of South America. <i>Quaternary Research</i> , 2004, 61, 95-104.	1.7	194
8	A 106ka paleoclimate record from drill core of the Salar de Atacama, northern Chile. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2001, 173, 21-42.	2.3	174
9	Elevated Eocene Atmospheric CO ₂ and Its Subsequent Decline. <i>Science</i> , 2006, 313, 1928-1928.	12.6	163
10	Chapter 3 Depositional Environments of Non-Marine Evaporites. <i>Developments in Sedimentology</i> , 1991, 50, 189-347.	0.5	144
11	200 k.y. paleoclimate record from Death Valley salt core. <i>Geology</i> , 1999, 27, 3.	4.4	144
12	Secular variation in the major-ion chemistry of seawater: Evidence from fluid inclusions in Cretaceous halites. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 1977-1994.	3.9	127
13	Model of seawater composition for the Phanerozoic. <i>Geology</i> , 2005, 33, 877.	4.4	121
14	Closed Basin Brine Evolution and the Influence of Ca-Cl Inflow Waters: Death Valley and Bristol Dry Lake California, Qaidam Basin, China, and Salar de Atacama, Chile. <i>Aquatic Geochemistry</i> , 2009, 15, 71-94.	1.3	116
15	Atmospheric pCO ₂ since 60 Ma from records of seawater pH, calcium, and primary carbonate mineralogy. <i>Geology</i> , 2003, 31, 793.	4.4	106
16	The major-ion composition of Permian seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 1701-1719.	3.9	102
17	U-Series Chronology of Lacustrine Deposits in Death Valley, California. <i>Quaternary Research</i> , 1998, 50, 261-275.	1.7	94
18	Microbial communities in fluid inclusions and long-term survival in halite. <i>GSA Today</i> , 2011, 21, 4-9.	2.0	94

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19	A 100 ka record of water tables and paleoclimates from salt cores, Death Valley, California. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 1996, 123, 179-203.	2.3	90
20	The major-ion composition of silurian seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2002, 66, 2683-2700.	3.9	89
21	Archaeal diversity along a subterranean salt core from the Salar Grande (Chile). <i>Environmental Microbiology</i> , 2011, 13, 2105-2121.	3.8	83
22	Paleotemperatures from fluid inclusions in halite: method verification and a 100,000 year paleotemperature record, Death Valley, CA. <i>Chemical Geology</i> , 1998, 150, 223-245.	3.3	79
23	Halophilic <i>Archaea</i> cultured from ancient halite, Death Valley, California. <i>Environmental Microbiology</i> , 2010, 12, 440-454.	3.8	78
24	Progressive aridification in East Africa over the last half million years and implications for human evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 11174-11179.	7.1	77
25	Origin of depositional cycles in a Permian "saline giant": The Salado (McNutt zone) evaporites of New Mexico and Texas. <i>Bulletin of the Geological Society of America</i> , 1988, 100, 592-608.	3.3	75
26	ESEM-EDS: an improved technique for major element chemical analysis of fluid inclusions. <i>Chemical Geology</i> , 2000, 164, 171-181.	3.3	67
27	Microscopic Identification of Prokaryotes in Modern and Ancient Halite, Saline Valley and Death Valley, California. <i>Astrobiology</i> , 2009, 9, 467-482.	3.0	65
28	New evidence for 250 Ma age of halotolerant bacterium from a Permian salt crystal. <i>Geology</i> , 2005, 33, 265.	4.4	64
29	Stable isotopes of lake and fluid inclusion brines, Dabusun Lake, Qaidam Basin, western China: Hydrology and paleoclimatology in arid environments. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 1995, 117, 279-290.	2.3	61
30	An ostracode based paleolimnologic and paleohydrologic history of Death Valley: 200 to 0 ka. <i>Bulletin of the Geological Society of America</i> , 2005, 117, 1379.	3.3	53
31	Responses of evaporite mineralogy to inflow water sources and climate during the past 100 k.y. in Death Valley, California. <i>Bulletin of the Geological Society of America</i> , 1997, 109, 1361-1371.	3.3	45
32	The Green River salt mystery: What was the source of the hyperalkaline lake waters?. <i>Earth-Science Reviews</i> , 2017, 173, 295-306.	9.1	45
33	Quaternary history of the Lake Magadi Basin, southern Kenya Rift: Tectonic and climatic controls. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 518, 97-118.	2.3	42
34	<i>Dunaliella</i> Cells in Fluid Inclusions in Halite: Significance for Long-term Survival of Prokaryotes. <i>Geomicrobiology Journal</i> , 2010, 27, 61-75.	2.0	39
35	Geochemical indicators in Western Mediterranean Messinian evaporites: Implications for the salinity crisis. <i>Marine Geology</i> , 2018, 403, 197-214.	2.1	36
36	Capillary Electrophoresis Analysis of Organic Amines and Amino Acids in Saline and Acidic Samples Using the Mars Organic Analyzer. <i>Astrobiology</i> , 2009, 9, 823-831.	3.0	33

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37	Hydrochemical characteristics and brine evolution paths of Lop Nor Basin, Xinjiang Province, Western China. <i>Applied Geochemistry</i> , 2010, 25, 1770-1782.	3.0	31
38	Ancient Microbes from Halite Fluid Inclusions: Optimized Surface Sterilization and DNA Extraction. <i>PLoS ONE</i> , 2011, 6, e20683.	2.5	30
39	Preservation of primary lake signatures in alkaline earth carbonates of the Eocene Green River Wilkins Peak-Laney Member transition zone. <i>Sedimentary Geology</i> , 2014, 314, 75-91.	2.1	29
40	Spatial and temporal geochemical variability in lacustrine sedimentation in the East African Rift System: Evidence from the Kenya Rift and regional analyses. <i>Sedimentology</i> , 2018, 65, 1697-1730.	3.1	29
41	Sr isotope and major ion compositional evidence for formation of Qarhan Salt Lake, western China. <i>Chemical Geology</i> , 2018, 497, 128-145.	3.3	29
42	Experimental study of shortite (Na ₂ Ca ₂ (CO ₃) ₃) formation and application to the burial history of the Wilkins Peak Member, Green River Basin, Wyoming, USA. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 115, 31-45.	3.9	27
43	Influence of magmatic-hydrothermal activity on brine evolution in closed basins: Searles Lake, California. <i>Bulletin of the Geological Society of America</i> , 2016, 128, 1555-1568.	3.3	27
44	The role of hydrothermal fluids in sedimentation in saline alkaline lakes: Evidence from Nasikie Engida, Kenya Rift Valley. <i>Sedimentology</i> , 2021, 68, 108-134.	3.1	25
45	The major-ion composition of Carboniferous seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 134, 317-334.	3.9	24
46	Characterization of Ancient DNA Supports Long-Term Survival of Haloarchaea. <i>Astrobiology</i> , 2014, 14, 553-560.	3.0	22
47	Sedimentology and stratigraphy of a modern halite sequence formed under Dead Sea level fall. <i>Sedimentology</i> , 2021, 68, 1069-1090.	3.1	15
48	Major-element and stable-isotope geochemistry of fluid inclusions in halite, Qaidam Basin, western China: Implications for late Pleistocene/Holocene brine evolution and paleoclimates. <i>Special Paper of the Geological Society of America</i> , 1994, , 19-32.	0.5	14
49	A Brine Evolution Model and Mineralogy of Chemical Sediments in a Volcanic Crater, Lake Kitagata, Uganda. <i>Aquatic Geochemistry</i> , 2011, 17, 129-140.	1.3	14
50	Starvation-Survival in Haloarchaea. <i>Life</i> , 2015, 5, 1587-1609.	2.4	14
51	Searles Lake evaporite sequences: Indicators of late Pleistocene/Holocene lake temperatures, brine evolution, and $\delta^{13}C_{org}$. <i>Bulletin of the Geological Society of America</i> , 2021, 133, 2319-2334.	3.3	13
52	A million year vegetation history and palaeoenvironmental record from the Lake Magadi Basin, Kenya Rift Valley. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 567, 110247.	2.3	13
53	Evaporites of the Green River Formation, Bridger and Piceance Creek Basins: Deposition, Diagenesis, Paleobrine Chemistry, and Eocene Atmospheric CO ₂ . <i>Syntheses in Limnogeology</i> , 2015, , 277-312.	0.4	13
54	Reconstructing the Environmental Context of Human Origins in Eastern Africa Through Scientific Drilling. <i>Annual Review of Earth and Planetary Sciences</i> , 2022, 50, 451-476.	11.0	13

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55	The Aspen paleoriver: Linking Eocene magmatism to the world's largest Na-carbonate evaporite (Wyoming, USA). <i>Geology</i> , 2019, 47, 1020-1024.	4.4	11
56	When "evaporites" are not formed by evaporation: The role of temperature and pCO ₂ on saline deposits of the Eocene Green River Formation, Colorado, USA. <i>Bulletin of the Geological Society of America</i> , 2020, 132, 1365-1380.	3.3	11
57	LATE PLEISTOCENE SALINE LACUSTRINE SEDIMENTS, BADWATER BASIN, DEATH VALLEY, CALIFORNIA. , 1994, , 61-103.		11
58	Anomalously High Cretaceous Paleobrine Temperatures: Hothouse, Hydrothermal or Solar Heating?. <i>Minerals (Basel, Switzerland)</i> , 2017, 7, 245.	2.0	10
59	Late Miocene evaporite geochemistry of Lorca and Fortuna basins (Eastern Betics, SE Spain): Evidence of restriction and continentalization. <i>Basin Research</i> , 2020, 32, 916-948.	2.7	10
60	Combined LA-ICP-MS and cryo-SEM-EDS: An improved technique for quantitative analysis of major, minor, and trace elements in fluid inclusions in halite. <i>Chemical Geology</i> , 2020, 551, 119762.	3.3	10
61	A 200,000-year $\delta^{18}O$ record of closed-basin lacustrine calcite, Death Valley, California. <i>Chemical Geology</i> , 2005, 216, 99-111.	3.3	9
62	Middle Pleistocene to recent diatoms and stratigraphy of the Magadi Basin, south Kenya Rift. <i>Journal of Paleolimnology</i> , 2021, 65, 315-333.	1.6	9
63	A 200,000-Year Record of Change in Oxygen Isotope Composition of Sulfate in a Saline Sediment Core, Death Valley, California. <i>Quaternary Research</i> , 1999, 51, 148-157.	1.7	8
64	Labyrinth patterns in Magadi (Kenya) cherts: Evidence for early formation from siliceous gels. <i>Geology</i> , 2021, 49, 1137-1142.	4.4	7
65	The Use of Mg/Ca as a Seawater Temperature Proxy. <i>The Paleontological Society Papers</i> , 2012, 18, 85-100.	0.6	6
66	Modern and Ancient Animal Traces in the Extreme Environments of Lake Magadi and Nasikie Engida, Kenya Rift Valley. <i>Syntheses in Limnogeology</i> , 2021, , 19-66.	0.4	5
67	Microorganisms in Evaporites: Review of Modern Geomicrobiology. , 2012, , 117-139.		4
68	Microbial Habitability and Pleistocene Aridification of the Asian Interior. <i>Astrobiology</i> , 2016, 16, 379-388.	3.0	4
69	ORIGINS OF MAGADI-TYPE CHERT: NEW CLUES FROM THE HSPDP LAKE MAGADI DRILL CORES. , 2016, ,		4
70	Spring origin of Eocene carbonate mounds in the Green River Formation, Northern Bridger Basin, Wyoming, USA. <i>Sedimentology</i> , 2021, 68, 2334-2364.	3.1	3
71	Criteria for the recognition of clastic halite: The modern Dead Sea shoreline. <i>Sedimentology</i> , 2021, 68, 2253-2269.	3.1	2
72	THE SEDIMENTARY RECORD OF THE LAKE MAGADI BASIN: CORE ANALYSIS FROM HSPDP-MAG14 CORES 1A, 1C, AND 2A. , 2016, ,		2

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73	LAKE MAGADI, KENYA: MODERN-PLEISTOCENE ANALOG FOR ALKALINE SALINE LAKE DEPOSITS. , 2016, , .		2
74	PALEOHYDROLOGY OF SPRING DEPOSITS IN THE WILKINS PEAK MEMBER OF THE EOCENE GREEN RIVER FORMATION, BRIDGER BASIN, WY. , 2016, , .		2
75	Groundwater mixing in an alkaline paleolake: Eocene Green River Formation, Wyoming. Palaeogeography, Palaeoclimatology, Palaeoecology, 2021, 561, 110038.	2.3	1
76	WAS COLORADO MINERAL BELT VOLCANISM RESPONSIBLE FOR SODIUM-CARBONATE EVAPORITE DEPOSITS IN THE EOCENE GREEN RIVER FORMATION?. , 2016, , .		1
77	QUATERNARY ENVIRONMENTS OF THE MAGADI BASIN: GEOCHEMICAL AND MICROFOSSIL STRATIGRAPHIC VARIABILITY. , 2016, , .		1
78	A computer vision algorithm for interpreting lacustrine carbonate textures at Searles Valley, USA. Computers and Geosciences, 2022, 166, 105142.	4.2	1
79	Redox conditions in Late Permian seawater based on trace metal ratios in fluid inclusions in halite from the Polish Zechstein Basin. Chemical Geology, 2022, 596, 120794.	3.3	0