

Werner Aeschbach

List of Publications by Year in descending order

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91
papers

5,168
citations

81900

39
h-index

88630

70
g-index

96
all docs

96
docs citations

96
times ranked

4129
citing authors

#	ARTICLE	IF	CITATIONS
1	High temperature noble gas thermometry in Lake Kivu, East Africa. <i>Science of the Total Environment</i> , 2022, 837, 155859.	8.0	1
2	Extending Noble Gas Solubilities in Water to Higher Temperatures for Environmental Application. <i>Journal of Chemical & Engineering Data</i> , 2022, 67, 1164-1173.	1.9	2
3	Widespread six degrees Celsius cooling on land during the Last Glacial Maximum. <i>Nature</i> , 2021, 593, 228-232.	27.8	65
4	Paleoclimate Signals and Groundwater Age Distributions From 39 Public Water Works in the Netherlands; Insights From Noble Gases and Carbon, Hydrogen and Oxygen Isotope Tracers. <i>Water Resources Research</i> , 2021, 57, e2020WR029058.	4.2	7
5	Understanding the mechanisms of groundwater recharge and flow in periglacial environments: New insights from the Ledo-Paniselian aquifer in Belgium. <i>Journal of Contaminant Hydrology</i> , 2021, 241, 103819.	3.3	0
6	A palaeoclimatic record from the Ledo-Paniselian Aquifer in Belgium – Indications for groundwater recharge and flow in a periglacial environment. <i>Quaternary International</i> , 2020, 547, 127-144.	1.5	5
7	Viability of public spaces in cities under increasing heat: A transdisciplinary approach. <i>Sustainable Cities and Society</i> , 2020, 59, 102215.	10.4	18
8	The Demographics of Water: A Review of Water Ages in the Critical Zone. <i>Reviews of Geophysics</i> , 2019, 57, 800-834.	23.0	197
9	Dating glacier ice of the last millennium by quantum technology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 8781-8786.	7.1	15
10	Intrusion of Saline Water into a Coastal Aquifer Containing Palaeogroundwater in the Viimsi Peninsula in Estonia. <i>Geosciences (Switzerland)</i> , 2019, 9, 47.	2.2	3
11	Origin and formation of methane in groundwater of glacial origin from the Cambrian-Vendian aquifer system in Estonia. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 251, 247-264.	3.9	9
12	Dating of glacial palaeogroundwater in the Ordovician-Cambrian aquifer system, northern Baltic Artesian Basin. <i>Applied Geochemistry</i> , 2019, 102, 64-76.	3.0	8
13	A new software tool for the analysis of noble gas data sets from (ground)water. <i>Environmental Modelling and Software</i> , 2018, 103, 120-130.	4.5	27
14	³⁹ Ar dating with small samples provides new key constraints on ocean ventilation. <i>Nature Communications</i> , 2018, 9, 5046.	12.8	29
15	Using ⁸¹ Kr and noble gases to characterize and date groundwater and brines in the Baltic Artesian Basin on the one-million-year timescale. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 205, 187-210.	3.9	59
16	Ascending Deep Fluids into Shallow Aquifer at Hydraulically Active Segments of the Western Boundary Fault of the Rhine Graben, Germany: Constraints from ⁸⁷ Sr/ ⁸⁶ Sr ratios. <i>Procedia Earth and Planetary Science</i> , 2017, 17, 81-84.	0.6	1
17	⁸⁷ Sr/ ⁸⁶ Sr Ratios in Shallow and Deep Aquifers and Thermal Water from the Eastern Boundary Fault of the Northern Upper Rhine Graben at the Heidelberg Basin, Germany. <i>Procedia Earth and Planetary Science</i> , 2017, 17, 108-111.	0.6	3
18	⁸⁷ Sr/ ⁸⁶ Sr Ratios in Thermal Water from the Southern Upper Rhine Graben, Germany. <i>Procedia Earth and Planetary Science</i> , 2017, 17, 364-367.	0.6	1

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19	87Sr/86Sr Ratios in Shallow and Deep Aquifers from the Southern Upper Rhine Graben, Germany. <i>Procedia Earth and Planetary Science</i> , 2017, 17, 626-629.	0.6	0
20	Use of multiple age tracers to estimate groundwater residence times and long-term recharge rates in arid southern Oman. <i>Applied Geochemistry</i> , 2016, 74, 67-83.	3.0	29
21	New perspectives for noble gases in oceanography. <i>Journal of Geophysical Research: Oceans</i> , 2016, 121, 6550-6554.	2.6	5
22	Noble gases reveal the complex groundwater mixing pattern and origin of salinization in the Azraq Oasis, Jordan. <i>Applied Geochemistry</i> , 2016, 66, 114-128.	3.0	5
23	Identification of He sources and estimation of He ages in groundwater of the North China Plain. <i>Applied Geochemistry</i> , 2015, 63, 182-189.	3.0	13
24	Radiokrypton dating finally takes off. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 6856-6857.	7.1	12
25	Noble gas concentrations in fluid inclusions as tracer for the origin of coarse-crystalline cryogenic cave carbonates. <i>Chemical Geology</i> , 2014, 368, 54-62.	3.3	9
26	Reproducibility and accuracy of noble gas measurements on water samples in the microlitre range. <i>Rapid Communications in Mass Spectrometry</i> , 2014, 28, 42-48.	1.5	1
27	Groundwater dating with Atom Trap Trace Analysis of ^{39}Ar . <i>Geophysical Research Letters</i> , 2014, 41, 6758-6764.	4.0	42
28	Properties of the closed-system equilibration model for dissolved noble gases in groundwater. <i>Chemical Geology</i> , 2013, 339, 291-300.	3.3	12
29	Response of noble gas partial pressures in soil air to oxygen depletion. <i>Chemical Geology</i> , 2013, 339, 283-290.	3.3	17
30	Factors controlling terrigenous SF ₆ in young groundwater of the Odenwald region (Germany). <i>Applied Geochemistry</i> , 2013, 33, 318-329.	3.0	26
31	Noble gas and isotope geochemistry in western Canadian Arctic watersheds: tracing groundwater recharge in permafrost terrain. <i>Hydrogeology Journal</i> , 2013, 21, 79-91.	2.1	28
32	Reconstruction of drip-water $\delta^{18}\text{O}$ based on calcite oxygen and clumped isotopes of speleothems from Bunker Cave (Germany). <i>Climate of the Past</i> , 2013, 9, 377-391.	3.4	47
33	Noble Gas Thermometry in Groundwater Hydrology. <i>Advances in Isotope Geochemistry</i> , 2013, , 81-122.	1.4	55
34	Regional strategies for the accelerating global problem of groundwater depletion. <i>Nature Geoscience</i> , 2012, 5, 853-861.	12.9	603
35	Origin and Flow Dynamics of Perennial Groundwater in Continuous Permafrost Terrain using Isotopes and Noble Gases: Case Study of the Fishing Branch River, Northern Yukon, Canada. <i>Permafrost and Periglacial Processes</i> , 2012, 23, 91-106.	3.4	18
36	Localising and quantifying groundwater inflow into lakes using high-precision ^{222}Rn profiles. <i>Journal of Hydrology</i> , 2012, 450-451, 70-81.	5.4	39

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37	Preface: Insights from environmental tracers in groundwater systems. <i>Hydrogeology Journal</i> , 2011, 19, 1-3.	2.1	17
38	Dating cave drip water by tritium. <i>Journal of Hydrology</i> , 2010, 394, 396-406.	5.4	67
39	A 40â€‰ka record of temperature and permafrost conditions in northwestern Europe from noble gases in the Ledo-Paniselian Aquifer (Belgium). <i>Journal of Quaternary Science</i> , 2010, 25, 1038-1044.	2.1	29
40	Dating of "young" groundwaters using environmental tracers: advantages, applications, and research needs. <i>Isotopes in Environmental and Health Studies</i> , 2010, 46, 259-278.	1.0	64
41	Accumulation of natural SF ₆ in the sedimentary aquifers of the North China Plain as a restriction on groundwater dating. <i>Isotopes in Environmental and Health Studies</i> , 2010, 46, 279-290.	1.0	24
42	Towards the realization of atom trap trace analysis for ³⁹ Ar. <i>New Journal of Physics</i> , 2010, 12, 065031.	2.9	17
43	A new groundwater radiocarbon correction approach accounting for palaeoclimate conditions during recharge and hydrochemical evolution: The Ledo-Paniselian Aquifer, Belgium. <i>Applied Geochemistry</i> , 2010, 25, 437-455.	3.0	30
44	Characterizing the recharge regime of the strongly exploited aquifers of the North China Plain by environmental tracers. <i>Water Resources Research</i> , 2010, 46, .	4.2	51
45	Assessing the use of ³ H- ³ He dating to determine the subsurface transit time of cave drip waters. <i>Isotopes in Environmental and Health Studies</i> , 2010, 46, 299-311.	1.0	7
46	Trace elements in recent groundwater of an artesian flow system and comparison with snow: enrichments, depletions, and chemical evolution of the water. <i>Journal of Environmental Monitoring</i> , 2010, 12, 208-217.	2.1	38
47	Hyperfine spectroscopy of the 1s ^{5/2} p ⁹ transition of A ³⁹ r. <i>Review of Scientific Instruments</i> , 2009, 80, 113109.	1.3	9
48	Clean coal and sparkling water. <i>Nature</i> , 2009, 458, 583-584.	27.8	4
49	A record of temperature and monsoon intensity over the past 40 kyr from groundwater in the North China Plain. <i>Chemical Geology</i> , 2009, 259, 168-180.	3.3	57
50	European climate variations over the past half millennium reconstructed from groundwater. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	12
51	Exceptional mixing events in meromictic Lake Lugano (Switzerland/Italy), studied using environmental tracers. <i>Limnology and Oceanography</i> , 2009, 54, 1113-1124.	3.1	49
52	Modeling excess air and degassing in groundwater by equilibrium partitioning with a gas phase. <i>Water Resources Research</i> , 2008, 44, .	4.2	102
53	A new tool for palaeoclimate reconstruction: Noble gas temperatures from fluid inclusions in speleothems. <i>Earth and Planetary Science Letters</i> , 2008, 269, 408-415.	4.4	57
54	A time series of environmental tracer data from deep meromictic Lake Lugano, Switzerland. <i>Limnology and Oceanography</i> , 2007, 52, 257-273.	3.1	29

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55	Constraining the age distribution of highly mixed groundwater using ^{39}Ar : A multiple environmental tracer ($^3\text{H}/^3\text{He}$, ^{85}Kr , ^{39}Ar , and ^{14}C) study in the semiconfined Fontainebleau Sands Aquifer (France). <i>Water Resources Research</i> , 2007, 43, .	4.2	94
56	Tracing and quantifying groundwater inflow into lakes using a simple method for radon-222 analysis. <i>Hydrology and Earth System Sciences</i> , 2007, 11, 1621-1631.	4.9	49
57	Rebuttal of "On global forces of nature driving the Earth's climate. Are humans involved?" by L. F. Khilyuk and G. V. Chilingar. <i>Environmental Geology</i> , 2007, 52, 1007-1009.	1.2	4
58	Groundwater recharge history and hydrogeochemical evolution in the Minqin Basin, North West China. <i>Applied Geochemistry</i> , 2006, 21, 2148-2170.	3.0	210
59	A comment on "Helium sources in passive margin aquifers" new evidence for a significant mantle ^3He source in aquifers with unexpectedly low in situ $^3\text{He}/^4\text{He}$ production" by M. C. Castro [<i>Earth Planet. Sci. Lett.</i> 222 (2004) 897-913]. <i>Earth and Planetary Science Letters</i> , 2005, 240, 827-829.	4.4	5
60	^{36}Cl in modern groundwater dated by a multi-tracer approach ($^3\text{H}/^3\text{He}$, SF_6 , CFC-12 and ^{85}Kr): a case study in quaternary sand aquifers in the Odense Pilot River Basin, Denmark. <i>Applied Geochemistry</i> , 2005, 20, 599-609.	3.0	43
61	Response to the comment by G. Favreau, A. Guero, and J. Seidel on "Improving noble gas based paleoclimate reconstruction and groundwater dating using $^{20}\text{Ne}/^{22}\text{Ne}$ ratios" (2003) <i>Geochim. Cosmochim. Acta</i> , 67, 587-600. Associate editor: B. Marty. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 1437-1438.	3.9	0
62	Kinetic Model of Gas Bubble Dissolution in Groundwater and Its Implications for the Dissolved Gas Composition. <i>Environmental Science & Technology</i> , 2003, 37, 1337-1343.	10.0	123
63	Improving noble gas based paleoclimate reconstruction and groundwater dating using $^{20}\text{Ne}/^{22}\text{Ne}$ ratios. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 587-600.	3.9	79
64	A comparison of groundwater dating with ^{81}Kr , ^{36}Cl and ^4He in four wells of the Great Artesian Basin, Australia. <i>Earth and Planetary Science Letters</i> , 2003, 211, 237-250.	4.4	119
65	Analysis of dissolved noble gases in the porewater of lacustrine sediments. <i>Limnology and Oceanography: Methods</i> , 2003, 1, 51-62.	2.0	26
66	Rapid deepwater renewal in Lake Issyk-Kul (Kyrgyzstan) indicated by transient tracers. <i>Limnology and Oceanography</i> , 2002, 47, 1210-1216.	3.1	36
67	Correction to "Noble gases and radiocarbon in natural gas hydrates" by Gisela Winckler, Werner Aeschbach-Hertig, Johannes Holoher, Rolf Kipfer, Ingeborg Levin, Christian Poss, Gregor Rehder, Erwin Suess, and Peter Schlosser. <i>Geophysical Research Letters</i> , 2002, 29, 25-1-25-1.	4.0	1
68	Noble Gases in Lakes and Ground Waters. <i>Reviews in Mineralogy and Geochemistry</i> , 2002, 47, 615-700.	4.8	261
69	A paleotemperature record derived from dissolved noble gases in groundwater of the Aquia Aquifer (Maryland, USA). <i>Geochimica Et Cosmochimica Acta</i> , 2002, 66, 797-817.	3.9	111
70	Experimental investigations on the formation of excess air in quasi-saturated porous media. <i>Geochimica Et Cosmochimica Acta</i> , 2002, 66, 4103-4117.	3.9	88
71	The physical structure and dynamics of a deep, meromictic crater lake (Lac Pavin, France). <i>Hydrobiologia</i> , 2002, 487, 111-136.	2.0	57
72	Isotopic methods and their hydrogeochemical context in the investigation of palaeowaters. <i>Geological Society Special Publication</i> , 2001, 189, 193-212.	1.3	22

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73	Constraints on origin and evolution of Red Sea brines from helium and argon isotopes. <i>Earth and Planetary Science Letters</i> , 2001, 184, 671-683.	4.4	63
74	Noble Gas and Major Element Constraints on the Water Dynamics in an Alpine Floodplain. <i>Ground Water</i> , 2001, 39, 841-852.	1.3	24
75	Palaeowaters from the Glatt Valley, Switzerland. <i>Geological Society Special Publication</i> , 2001, 189, 155-162.	1.3	5
76	Palaeotemperature reconstruction from noble gases in ground water taking into account equilibration with entrapped air. <i>Nature</i> , 2000, 405, 1040-1044.	27.8	287
77	Analysis of deep-water exchange in the Caspian Sea based on environmental tracers. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2000, 47, 621-654.	1.4	97
78	Sub sea floor boiling of Red Sea brines: new indication from noble gas data. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 1567-1575.	3.9	45
79	Cool Glacial Temperatures and Changes in Moisture Source Recorded in Oman Groundwaters. <i>Science</i> , 2000, 287, 842-845.	12.6	154
80	A Mass Spectrometric System for the Analysis of Noble Gases and Tritium from Water Samples. <i>Environmental Science & Technology</i> , 2000, 34, 2042-2050.	10.0	209
81	Infiltration of river water to a shallow aquifer investigated with $^3\text{H}/^3\text{He}$, noble gases and CFCs. <i>Journal of Hydrology</i> , 1999, 220, 169-185.	5.4	110
82	Accumulation of mantle gases in a permanently stratified volcanic lake (Lac Pavin, France). <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 3357-3372.	3.9	65
83	Interpretation of dissolved atmospheric noble gases in natural waters. <i>Water Resources Research</i> , 1999, 35, 2779-2792.	4.2	282
84	A $^3\text{H}/^3\text{He}$ Study of Ground Water Flow in a Fractured Bedrock Aquifer. <i>Ground Water</i> , 1998, 36, 661-670.	1.3	72
85	Climate and Groundwater Recharge During the Last Glaciation in an Ice-Covered Region. , 1998, 282, 731-734.		97
86	Quantification of gas fluxes from the subcontinental mantle: The example of Laacher See, a maar lake in Germany. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 31-41.	3.9	71
87	Bottomwater formation due to hydrothermal activity in Frolikha Bay, Lake Baikal, eastern Siberia. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 961-971.	3.9	33
88	Density-driven exchange between the basins of Lake Lucerne (Switzerland) traced with the $^3\text{H}-^3\text{He}$ method. <i>Limnology and Oceanography</i> , 1996, 41, 707-721.	3.1	28
89	Injection of mantle type helium into Lake Van (Turkey): the clue for quantifying deep water renewal. <i>Earth and Planetary Science Letters</i> , 1994, 125, 357-370.	4.4	80
90	Density structure and tritium-helium age of deep hypolimnetic water in the northern basin of Lake Lugano. <i>Aquatic Sciences</i> , 1992, 54, 205-218.	1.5	44

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91	Multi-Tracer Groundwater Dating in Southern Oman using Bayesian Modelling. Water Resources Research, 0, , .	4.2	0