

Johannes A C Barth

List of Publications by Year in descending order

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112
papers

2,903
citations

186209

28
h-index

206029

48
g-index

134
all docs

134
docs citations

134
times ranked

3408
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of CO ₂ and associated carbon dynamics in headwater streams: A global perspective. <i>Reviews of Geophysics</i> , 2017, 55, 560-585.	9.0	198
2	Optimization of instrument setup and post-run corrections for oxygen and hydrogen stable isotope measurements of water by isotope ratio infrared spectroscopy (IRIS). <i>Limnology and Oceanography: Methods</i> , 2012, 10, 1024-1036.	1.0	182
3	Influence of carbonates on the riverine carbon cycle in an anthropogenically dominated catchment basin: evidence from major elements and stable carbon isotopes in the Lagan River (N. Ireland). <i>Chemical Geology</i> , 2003, 200, 203-216.	1.4	139
4	Applications of stable water and carbon isotopes in watershed research: Weathering, carbon cycling, and water balances. <i>Earth-Science Reviews</i> , 2011, 109, 20-31.	4.0	136
5	Carbon cycle in St. Lawrence aquatic ecosystems at Cornwall (Ontario), Canada: seasonal and spatial variations. <i>Chemical Geology</i> , 1999, 159, 107-128.	1.4	95
6	Origin of particulate organic carbon in the upper St. Lawrence: isotopic constraints. <i>Earth and Planetary Science Letters</i> , 1998, 162, 111-121.	1.8	81
7	Spatial and temporal variations of <i>p</i> CO ₂ , dissolved inorganic carbon and stable isotopes along a temperate karstic watercourse. <i>Hydrological Processes</i> , 2015, 29, 3423-3440.	1.1	78
8	How do long-term development and periodical changes of river-floodplain systems affect the fate of contaminants? Results from European rivers. <i>Environmental Pollution</i> , 2009, 157, 3336-3346.	3.7	70
9	Geochemical and isotope characterization of geothermal spring waters in Sri Lanka: Evidence for steeper than expected geothermal gradients. <i>Journal of Hydrology</i> , 2013, 476, 360-369.	2.3	66
10	Carbon Isotope Fractionation during Aerobic Biodegradation of Trichloroethene by <i>Burkholderia cepacia</i> G4: a Tool To Map Degradation Mechanisms. <i>Applied and Environmental Microbiology</i> , 2002, 68, 1728-1734.	1.4	60
11	Deposition, persistence and turnover of pollutants: First results from the EU project AquaTerra for selected river basins and aquifers. <i>Science of the Total Environment</i> , 2007, 376, 40-50.	3.9	59
12	Direct oxygen isotope effect identifies the rate-determining step of electrocatalytic OER at an oxidic surface. <i>Nature Communications</i> , 2018, 9, 4565.	5.8	58
13	Possible links between groundwater geochemistry and chronic kidney disease of unknown etiology (CKDu): an investigation from the Ginnoruwa region in Sri Lanka. <i>Exposure and Health</i> , 2020, 12, 823-834.	2.8	55
14	A review of methods used for equilibrium isotope fractionation investigations between dissolved inorganic carbon and CO ₂ . <i>Earth-Science Reviews</i> , 2012, 115, 192-199.	4.0	54
15	Title is missing!. , 2013, 9, 96.		54
16	Carbon and oxygen isotope indications for CO ₂ behaviour after injection: First results from the Ketzin site (Germany). <i>International Journal of Greenhouse Gas Control</i> , 2010, 4, 1000-1006.	2.3	53
17	Sorption of alkylphenols on Ebro River sediments: Comparing isotherms with field observations in river water and sediments. <i>Environmental Pollution</i> , 2009, 157, 698-703.	3.7	49
18	Field-Based Stable Isotope Analysis of Carbon Dioxide by Mid-Infrared Laser Spectroscopy for Carbon Capture and Storage Monitoring. <i>Analytical Chemistry</i> , 2014, 86, 12191-12198.	3.2	49

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19	Dissolved oxygen in water and its stable isotope effects: A review. <i>Chemical Geology</i> , 2017, 473, 10-21.	1.4	48
20	Assessing the usefulness of the isotopic composition of CO ₂ for leakage monitoring at CO ₂ storage sites: A review. <i>International Journal of Greenhouse Gas Control</i> , 2015, 37, 46-60.	2.3	46
21	Occurrence and fate of perfluorinated compounds in sewage sludge from Spain and Germany. <i>Environmental Science and Pollution Research</i> , 2012, 19, 4109-4119.	2.7	45
22	Carbon isotope fractionation during abiotic reductive dehalogenation of trichloroethene (TCE). <i>Chemosphere</i> , 2001, 44, 1281-1286.	4.2	41
23	Pleistocene paleo-groundwater as a pristine fresh water resource in southern Germany – evidence from stable and radiogenic isotopes. <i>Science of the Total Environment</i> , 2014, 496, 107-115.	3.9	41
24	Controls of evaporative irrigation return flows in comparison to seawater intrusion in coastal karstic aquifers in northern Sri Lanka: Evidence from solutes and stable isotopes. <i>Science of the Total Environment</i> , 2016, 548-549, 421-428.	3.9	40
25	Assessing moisture sources of precipitation in the Western Pamir Mountains (Tajikistan, Central Asia) using deuterium excess. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 71, 1601987.	0.8	39
26	Carbon isotope fractionation during reductive dechlorination of TCE in batch experiments with iron samples from reactive barriers. <i>Journal of Contaminant Hydrology</i> , 2003, 66, 25-37.	1.6	35
27	Mobility, turnover and storage of pollutants in soils, sediments and waters: achievements and results of the EU project AquaTerra. A review. <i>Agronomy for Sustainable Development</i> , 2009, 29, 161-173.	2.2	34
28	Routine analysis by high precision gas chromatography/mass selective detector/isotope ratio mass spectrometry to 0.1 parts per mil. , 1999, 13, 1231-1236.		33
29	Automated analyses of ¹⁸ O/ ¹⁶ O ratios in dissolved oxygen from 12 mL water samples. <i>Limnology and Oceanography: Methods</i> , 2004, 2, 35-41.	1.0	33
30	Mixing and transport of water in a karst catchment: a case study from precipitation via seepage to the spring. <i>Hydrology and Earth System Sciences</i> , 2009, 13, 285-292.	1.9	30
31	Controls on carbon cycling in two contrasting temperate zone estuaries: The Tyne and Tweed, UK. <i>Estuarine, Coastal and Shelf Science</i> , 2008, 78, 685-693.	0.9	29
32	Recharge velocity and geochemical evolution for the Permo-Triassic Sherwood Sandstone, Northern Ireland. <i>Journal of Hydrology</i> , 2005, 315, 308-324.	2.3	28
33	Predicting ¹³ C _{DIC} dynamics in CCS: A scheme based on a review of inorganic carbon chemistry under elevated pressures and temperatures. <i>International Journal of Greenhouse Gas Control</i> , 2011, 5, 1250-1258.	2.3	28
34	Stable carbon isotope analysis of dissolved inorganic carbon (DIC) and dissolved organic carbon (DOC) in natural waters – Results from a worldwide proficiency test. <i>Rapid Communications in Mass Spectrometry</i> , 2013, 27, 2099-2107.	0.7	28
35	Comparison of precipitation collectors used in isotope hydrology. <i>Chemical Geology</i> , 2018, 488, 171-179.	1.4	27
36	Arsenic-rich shallow groundwater in sandy aquifer systems buffered by rising carbonate waters: A geochemical case study from Mannar Island, Sri Lanka. <i>Science of the Total Environment</i> , 2018, 633, 1352-1359.	3.9	27

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37	Indications for pedogenic formation of perylene in a terrestrial soil profile: Depth distribution and first results from stable carbon isotope ratios. <i>Applied Geochemistry</i> , 2007, 22, 2652-2663.	1.4	26
38	Influences of seawater intrusion and anthropogenic activities on shallow coastal aquifers in Sri Lanka: evidence from hydrogeochemical and stable isotope data. <i>Environmental Science and Pollution Research</i> , 2020, 27, 23002-23014.	2.7	26
39	Self-Organizing Maps for Evaluation of Biogeochemical Processes and Temporal Variations in Water Quality of Subtropical Reservoirs. <i>Water Resources Research</i> , 2019, 55, 10268-10281.	1.7	25
40	Quantification of long-term wastewater fluxes at the surface water/groundwater-interface: An integrative model perspective using stable isotopes and acesulfame. <i>Science of the Total Environment</i> , 2014, 466-467, 16-25.	3.9	24
41	Sources and sinks of nutrients and organic carbon during the 2014 pulse flow of the Colorado River into Mexico. <i>Ecological Engineering</i> , 2017, 106, 799-808.	1.6	22
42	The 2014 water release into the arid Colorado River delta and associated water losses by evaporation. <i>Science of the Total Environment</i> , 2016, 542, 586-590.	3.9	21
43	Acid rain footprint three decades after peak deposition: Long-term recovery from pollutant sulphate in the Uhlirska catchment (Czech Republic). <i>Science of the Total Environment</i> , 2017, 598, 1037-1049.	3.9	21
44	Net ecosystem production in the great lakes basin and its implications for the North American missing carbon sink: A hydrologic and stable isotope approach. <i>Global and Planetary Change</i> , 2008, 61, 15-27.	1.6	20
45	A high-resolution carbon balance in a small temperate catchment: Insights from the Schwabach River, Germany. <i>Applied Geochemistry</i> , 2017, 85, 86-96.	1.4	20
46	Quantification of groundwater-seawater interaction in a coastal sandy aquifer system: a study from Panama, Sri Lanka. <i>Environmental Earth Sciences</i> , 2014, 72, 867.	1.3	19
47	Dynamics of dissolved organic carbon in hillslope discharge: Modeling and challenges. <i>Journal of Hydrology</i> , 2017, 546, 309-325.	2.3	19
48	River recharge versus O ₂ supply from the unsaturated zone in shallow riparian groundwater: A case study from the Selke River (Germany). <i>Science of the Total Environment</i> , 2018, 634, 374-381.	3.9	19
49	Rapid groundwater recharge dynamics determined from hydrogeochemical and isotope data in a small permafrost watershed near Umiujaq (Nunavik, Canada). <i>Hydrogeology Journal</i> , 2020, 28, 853-868.	0.9	18
50	Stable water isotope patterns in a climate change hotspot: the isotope hydrology framework of Corsica (western Mediterranean). <i>Isotopes in Environmental and Health Studies</i> , 2014, 50, 184-200.	0.5	17
51	Water mixing in a St. Lawrence river embayment to outline potential sources of pollution. <i>Applied Geochemistry</i> , 2004, 19, 1637-1641.	1.4	16
52	The integrated project AquaTerra of the EU sixth framework lays foundations for better understanding of river-sediment-soil-groundwater systems. <i>Journal of Environmental Management</i> , 2007, 84, 237-243.	3.8	16
53	Stable isotope mass balances versus concentration differences of dissolved inorganic carbon – implications for tracing carbon turnover in reservoirs. <i>Isotopes in Environmental and Health Studies</i> , 2017, 53, 413-426.	0.5	16
54	Transfer and transformations of oxygen in rivers as catchment reflectors of continental landscapes: A review. <i>Earth-Science Reviews</i> , 2021, 220, 103729.	4.0	16

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55	Stable carbon isotope techniques to quantify CO ₂ trapping under pre-equilibrium conditions and elevated pressures and temperatures. <i>Chemical Geology</i> , 2012, 320-321, 46-53.	1.4	15
56	Turnover and release of P-, N-, Si-nutrients in the Mexicali Valley (Mexico): Interactions between the lower Colorado River and adjacent ground- and surface water systems. <i>Science of the Total Environment</i> , 2015, 512-513, 185-193.	3.9	14
57	Groundwater data improve modelling of headwater stream CO ₂ outgassing with a stable DIC isotope approach. <i>Biogeosciences</i> , 2018, 15, 3093-3106.	1.3	14
58	Modelling multiseasonal preferential transport of dissolved organic carbon in a shallow forest soil: Equilibrium versus kinetic sorption. <i>Hydrological Processes</i> , 2019, 33, 2898-2917.	1.1	14
59	Tritium as a hydrological tracer in Mediterranean precipitation events. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 3555-3568.	1.9	14
60	Gas-Phase Photocatalytic Oxidation of Dichlorobutenes. <i>Environmental Science & Technology</i> , 2001, 35, 2823-2827.	4.6	13
61	Analyses of pre-injection reservoir data for stable carbon isotope trend predictions in CO ₂ monitoring: preparing for CO ₂ injection. <i>Environmental Earth Sciences</i> , 2012, 67, 473-479.	1.3	13
62	Groundwater recharge sites and pollution sources in the wine-producing Guadalupe Valley (Mexico): Restrictions and mixing prior to transfer of reclaimed water from the US-Mexico border. <i>Science of the Total Environment</i> , 2020, 713, 136715.	3.9	13
63	First indications of seasonal and spatial variations of water sources in pine trees along an elevation gradient in a Mediterranean ecosystem derived from $\delta^{18}O$. <i>Chemical Geology</i> , 2020, 549, 119695.	1.4	12
64	Monitoring of cap-rock integrity during CCS from field data at the Ketzin pilot site (Germany): Evidence from gas composition and stable carbon isotopes. <i>International Journal of Greenhouse Gas Control</i> , 2015, 43, 133-140.	2.3	11
65	Can conductivity and stable isotope tracers determine water sources during flooding? An example from the Elbe River in 2002. <i>International Journal of River Basin Management</i> , 2006, 4, 77-83.	1.5	10
66	Temporal offset between precipitation and water uptake of Mediterranean pine trees varies with elevation and season. <i>Science of the Total Environment</i> , 2021, 755, 142539.	3.9	10
67	Exposure Assessment of Fluoride Intake Through Commercially Available Black Tea (<i>Camellia sinensis</i>) in Sri Lanka. <i>Biological Trace Element Research</i> , 2022, 200, 526-534.	1.9	10
68	Climate Change, Water Resources and Pollution in the Ebro Basin: Towards an Integrated Approach. <i>Handbook of Environmental Chemistry</i> , 2010, , 295-329.	0.2	9
69	From Global to Local and Vice Versa: On the Importance of the "Globalization" Agenda in Continental Groundwater Research and Policy-Making. <i>Environmental Management</i> , 2016, 58, 491-503.	1.2	9
70	Insights into agricultural influences and weathering processes from major ion patterns. <i>Hydrological Processes</i> , 2018, 32, 891-903.	1.1	9
71	Multi-proxy approach involving ultrahigh resolution mass spectrometry and self-organising maps to investigate the origin and quality of sedimentary organic matter across a subtropical reservoir. <i>Organic Geochemistry</i> , 2021, 151, 104165.	0.9	9
72	High-resolution stable carbon isotope monitoring indicates variable flow dynamic patterns in a deep saline aquifer at the Ketzin pilot site (Germany). <i>Applied Geochemistry</i> , 2014, 47, 44-51.	1.4	8

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73	A Brief Overview of Isotope Measurements Carried Out at Various CCS Pilot Sites Worldwide. Springer Series in Geomechanics and Geoen지니어ing, 2013, , 75-87.	0.0	8
74	^{14}C and ^{13}C characteristics of organic matter and carbonate in saltmarsh sediments from south west Scotland. Journal of Environmental Monitoring, 2004, 6, 441-447.	2.1	7
75	Well-based, Geochemical Leakage Monitoring of an Aquifer Immediately Above a CO ₂ Storage Reservoir by Stable Carbon Isotopes at the Ketzin Pilot Site, Germany. Energy Procedia, 2013, 40, 346-354.	1.8	7
76	Stable carbon and oxygen equilibrium isotope fractionation of supercritical and subcritical CO ₂ with DIC and H ₂ O in saline reservoir fluids. International Journal of Greenhouse Gas Control, 2015, 39, 215-224.	2.3	7
77	Determining in situ pH values of pressurised fluids using stable carbon isotope techniques. Chemical Geology, 2015, 391, 1-6.	1.4	7
78	Water fluxes and their control on the terrestrial carbon balance: Results from a stable isotope study on the Clyde Watershed (Scotland). Applied Geochemistry, 2007, 22, 2684-2694.	1.4	6
79	Stable carbon isotope fractionation data between H ₂ CO ₃ [*] and CO ₂ (g) extended to 120°C. Rapid Communications in Mass Spectrometry, 2014, 28, 1691-1696.	0.7	6
80	Assessment of land subsidence mechanisms triggered by dolomitic marble dissolution from hydrogeochemistry and stable isotopes of spring waters. Applied Geochemistry, 2015, 58, 97-105.	1.4	6
81	Dominance of in situ produced particulate organic carbon in a subtropical reservoir inferred from carbon stable isotopes. Scientific Reports, 2020, 10, 13187.	1.6	6
82	Isotope alteration caused by changes in biochemical composition of sedimentary organic matter. Biogeochemistry, 2020, 147, 277-292.	1.7	6
83	Balance of carbon species combined with stable isotope ratios show critical switch towards bicarbonate uptake during cyanobacteria blooms. Science of the Total Environment, 2022, 807, 151067.	3.9	6
84	Dissolved oxygen isotope modelling refines metabolic state estimates of stream ecosystems with different land use background. Scientific Reports, 2022, 12, .	1.6	6
85	Interlaboratory test for oxygen and hydrogen stable isotope analyses of geothermal fluids: Assessment of reservoir fluid compositions. Rapid Communications in Mass Spectrometry, 2018, 32, 1799-1810.	0.7	5
86	Riverine carbon dioxide evasion along a high-relief watercourse derived from seasonal dynamics of the water-atmosphere gas exchange. Science of the Total Environment, 2019, 657, 1311-1322.	3.9	5
87	Altitude isotope effects in Mediterranean high-relief terrains: a correction method to utilize stream water data. Hydrological Sciences Journal, 2021, 66, 1409-1418.	1.2	5
88	Post-depositional alteration of stable isotope signals by preferential degradation of algae-derived organic matter in reservoir sediments. Biogeochemistry, 2022, 159, 315-336.	1.7	5
89	Novel evaluations of sources and sinks of dissolved oxygen via stable isotopes in lentic water bodies. Science of the Total Environment, 2022, 838, 156541.	3.9	5
90	A new approach to quantify system efficiency with dissolved oxygen isotopes during engineered growth of Galdieria sulphuraria. Algal Research, 2017, 26, 294-301.	2.4	4

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91	Isotopic composition of inorganic carbon as an indicator of benzoate degradation by <i>Pseudomonas putida</i> : temperature, growth rate and pH effects. <i>Rapid Communications in Mass Spectrometry</i> , 2000, 14, 1316-1320.	0.7	3
92	Geological CO ₂ quantified by high-temporal resolution stable isotope monitoring in a salt mine. <i>Scientific Reports</i> , 2020, 10, 20671.	1.6	3
93	Beware of effects on isotopes of dissolved oxygen during storage of natural iron-rich water samples: A technical note. <i>Rapid Communications in Mass Spectrometry</i> , 2021, 35, e9024.	0.7	3
94	Extreme gradients in CO ₂ losses downstream of karstic springs. <i>Science of the Total Environment</i> , 2021, 778, 146099.	3.9	3
95	A Summary on the Special Issue "Sustainability of Groundwater". <i>Sustainability</i> , 2011, 3, 1792-1795.	1.6	2
96	Advances in Stable Isotope Monitoring of CO ₂ Under Elevated Pressures, Temperatures and Salinities: Selected Results from the Project CO ₂ ISO-LABEL. <i>Advanced Technologies in Earth Sciences</i> , 2015, , 59-71.	0.9	2
97	Mobility, Turnover and Storage of Pollutants in Soils, Sediments and Waters: Achievements and Results of the EU Project AquaTerra - A Review. , 2009, , 857-871.		2
98	Correction to manuscript "Recharge velocity and geochemical evolution for the Permo-Triassic Sherwood Sandstone, Northern Ireland". <i>Journal of Hydrology</i> 315 (2005) 308-324. <i>Journal of Hydrology</i> , 2006, 330, 763-764.	2.3	1
99	How are oxygen budgets influenced by dissolved iron and growth of oxygenic phototrophs in an iron-rich spring system? Initial results from the Espan Spring in F ¹ / ₄ rth, Germany. <i>Biogeosciences</i> , 2021, 18, 4535-4548.	1.3	1
100	Reservoir and Cap Rock Monitoring. <i>Advanced Technologies in Earth Sciences</i> , 2013, , 99-130.	0.9	1
101	Small Streams Make Big Contribution to Carbon Cycle. <i>Eos</i> , 2017, 98, .	0.1	1
102	Oxygen and Hydrogen Stable Isotopes in Earth's Hydrologic Cycle. , 2016, , 173-187.		1
103	Statistical Approaches Link Sources of Sediment Contamination in Subtropical Reservoirs to Land Use: an Example from the Itaparanga Reservoir (Brazil). <i>Water, Air, and Soil Pollution</i> , 2022, 233, 1.	1.1	1
104	Transfer of pollutants in soils, sediments and water systems: From small to large scale. <i>Journal of Hydrology</i> , 2009, 369, 223-224.	2.3	0
105	Was ist neu bei Grundwasser? "Staffelstab" übernommen. <i>Grundwasser</i> , 2010, 15, 1-1.	1.4	0
106	Hydrogeologie unter einem D-A-CH . <i>Grundwasser</i> , 2010, 15, 87-87.	1.4	0
107	Vorhang auf "Online ist on stage. <i>Grundwasser</i> , 2012, 17, 55-55.	1.4	0
108	Zu wenig Wasser oder zu wenig Zuversicht?. <i>Grundwasser</i> , 2013, 18, 1-1.	1.4	0

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109	Fast 200 Billionen Liter später â€ . Grundwasser, 2013, 18, 221-221.	1.4	0
110	Können es nicht auch zwei Mitgliedschaften sein?. Grundwasser, 2014, 19, 235-235.	1.4	0
111	Selected groundwater studies of EU project AquaTerra leading to large-scale basin considerations. Water Practice and Technology, 2007, 2, .	1.0	0
112	Stocks, Flows, and Prospects of Water. , 2009, , 308-319.		0