Mark Cuthbert

List of Publications by Year
in descending order

77	3,006	159358 30	182168 51
papers	citations	h-index	g-index

118	118	118	3275
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Global patterns and dynamics of climateâ€“groundwater interactions. Nature Climate Change, 2019, 9, 137-141.	8.1	244
2	A Field and Modeling Study of Fractured Rock Permeability Reduction Using Microbially Induced Calcite Precipitation. Environmental Science & Technology, 2013, 47, 13637-13643.	4.6	178
3	Observed controls on resilience of groundwater to climate variability in sub-Saharan Africa. Nature, 2019, 572, 230-234.	13.7	168
4	Global Groundwater Sustainability, Resources, and Systems in the Anthropocene. Annual Review of Earth and Planetary Sciences, 2020, 48, 431-463.	4.6	161
5	Comparison of rates of ureolysis between Sporosarcina pasteurii and an indigenous groundwater community under conditions required to precipitate large volumes of calcite. Geochimica Et Cosmochimica Acta, 2011, 75, 3290-3301.	1.6	152
6	Towards best practice for assessing the impacts of climate change on groundwater. Hydrogeology Journal, 2012, 20, 1-4.	0.9	99
7	Controls on the rate of ureolysis and the morphology of carbonate precipitated by S. Pasteurii biofilms and limits due to bacterial encapsulation. Ecological Engineering, 2012, 41, 32-40.	1.6	94
8	Global analysis reveals climatic controls on the oxygen isotope composition of cave drip water. Nature Communications, 2019, 10, 2984.	5.8	81
9	An improved time series approach for estimating groundwater recharge from groundwater level fluctuations. Water Resources Research, 2010, 46, .	1.7	70
10	Drip water isotopes in semi-arid karst: Implications for speleothem paleoclimatology. Earth and Planetary Science Letters, 2014, 395, 194-204.	1.8	66
11	Highway deicing salt dynamic runoff to surface water and subsequent infiltration to groundwater during severe UK winters. Science of the Total Environment, 2016, 565, 324-338.	3.9	62
12	Dripwater organic matter and trace element geochemistry in a semi-arid karst environment: Implications for speleothem paleoclimatology. Geochimica Et Cosmochimica Acta, 2014, 135, 217-230.	1.6	61
13	Understanding and quantifying focused, indirect groundwater recharge from ephemeral streams using water table fluctuations. Water Resources Research, 2016, 52, 827-840.	1.7	61
14	Hourly potential evapotranspiration at 0.1Â° resolution for the global land surface from 1981-present. Scientific Data, 2021, 8, 224.	2.4	59
15	Understanding process dynamics at aquifer-surface water interfaces: An introduction to the special section on new modeling approaches and novel experimental technologies. Water Resources Research, 2014, 50, 1847-1855.	1.7	52
16	TheÂEl NiÃ±o event of 2015â€“2016: climate anomalies and their impact on groundwater resources in East and Southern Africa. Hydrology and Earth System Sciences, 2019, 23, 1751-1762.	1.9	52
17	Modelling the role of groundwater hydro-refugia in East African hominin evolution and dispersal. Nature Communications, 2017, 8, 15696.	5.8	47
18	Impacts of nonuniform flow on estimates of vertical streambed flux. Water Resources Research, 2013, 49, 19-28.	1.7	46

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19	Bacterially Produced Calcium Phosphate Nanobiominerals: Sorption Capacity, Site Preferences, and Stability of Captured Radionuclides. Environmental Science & Technology, 2014, 48, 6891-6898.	4.6	43
20	Straight thinking about groundwater recession. Water Resources Research, 2014, 50, 2407-2424.	1.7	40
21	Transport of Sporosarcina pasteurii in sandstone and its significance for subsurface engineering technologies. Applied Geochemistry, 2014, 42, 38-44.	1.4	40
22	Semi-arid zone caves: Evaporation and hydrological controls on Î´18O drip water composition and implications for speleothem paleoclimate reconstructions. Quaternary Science Reviews, 2016, 131, 285-301.	1.4	40
23	Global climate-driven trade-offs between the water retention and cooling benefits of urban greening. Nature Communications, 2022, 13, 518.	5.8	39
24	Impacts of river bed gas on the hydraulic and thermal dynamics of the hyporheic zone. Advances in Water Resources, 2010, 33, 1347-1358.	1.7	38
25	GMD perspective: The quest to improve the evaluation of groundwater representation in continental- to global-scale models. Geoscientific Model Development, 2021, 14, 7545-7571.	1.3	38
26	Characterising the dynamics of surface water-groundwater interactions in intermittent and ephemeral streams using streambed thermal signatures. Advances in Water Resources, 2017, 107, 354-369.	1.7	37
27	Understanding the potential of climate teleconnections to project future groundwater drought. Hydrology and Earth System Sciences, 2019, 23, 3233-3245.	1.9	37
28	A Spring Forward for Hominin Evolution in East Africa. PLoS ONE, 2014, 9, e107358.	1.1	36
29	Assessing the accuracy of 1â€Ð analytical heat tracing for estimating nearâ€surface sediment thermal diffusivity and water flux under transient conditions. Journal of Geophysical Research F: Earth Surface, 2015, 120, 1551-1573.	1.0	34
30	Comparisons of observed and modelled lake Î´18O variability. Quaternary Science Reviews, 2016, 131, 329-340.	1.4	34
31	Combining unsaturated and saturated hydraulic observations to understand and estimate groundwater recharge through glacial till. Journal of Hydrology, 2010, 391, 263-276.	2.3	31
32	Controls on cave drip water temperature and implications for speleothem-based paleoclimate reconstructions. Quaternary Science Reviews, 2015, 127, 19-36.	1.4	31
33	A conceptual model for climatic teleconnection signal control on groundwater variability in Europe. Earth-Science Reviews, 2018, 177, 164-174.	4.0	31
34	Linking soil moisture balance and source-responsive models to estimate diffuse and preferential components of groundwater recharge. Hydrology and Earth System Sciences, 2013, 17, 1003-1019.	1.9	30
35	An objective frequency domain method for quantifying confined aquifer compressible storage using Earth and atmospheric tides. Geophysical Research Letters, 2016, 43, 11,671.	1.5	30
36	Towards an integrated understanding of how micro scale processes shape groundwater ecosystem functions. Science of the Total Environment, 2017, 592, 215-227.	3.9	30

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37	20,000 years of societal vulnerability and adaptation to climate change in southwest Asia. Wiley Interdisciplinary Reviews: Water, 2019, 6, e1330.	2.8	30
38	Evaporative cooling of speleothem drip water. Scientific Reports, 2014, 4, 5162.	1.6	29
39	The use of electrical resistivity tomography in deriving local-scale models of recharge through superficial deposits. Quarterly Journal of Engineering Geology and Hydrogeology, 2009, 42, 199-209.	0.8	28
40	The importance of preferential flow in controlling groundwater recharge in tropical Africa and implications for modelling the impact of climate change on groundwater resources. Journal of Water and Climate Change, 2010, 1, 234-245.	1.2	28
41	Kinetics of urease mediated calcite precipitation and permeability reduction of porous media evidenced by magnetic resonance imaging. International Journal of Environmental Science and Technology, 2013, 10, 881-890.	1.8	27
42	Characterising groundwaterâ€“surface water interactions in idealised ephemeral stream systems. Hydrological Processes, 2020, 34, 3792-3806.	1.1	27
43	The legacy of chlorinated solvents in the Birmingham aquifer, UK: Observations spanning three decades and the challenge of future urban groundwater development. Journal of Contaminant Hydrology, 2012, 140-141, 107-123.	1.6	26
44	å¯¹æ¯æ—¥å’Œæ›´çŸå“æœŸæ°´å´æ³¢åŠ¨è¿›è¡Œå„…é‡Œå¶ååˆ†æžæ¥¥äº†è§£ç›¸è¿žæŽ¥çš„å…³è¿°æ°´åœ°ä¸‹æ°´ç³»ç»Ÿ	0.9	25 Hydrogeology Jour
45	Drought onset and propagation into soil moisture and grassland vegetation responses during the 2012â€“2019Âmajor drought in Southern California. Hydrology and Earth System Sciences, 2021, 25, 3713-3729.	1.9	25
46	Organic characterisation of cave drip water by LC-OCD and fluorescence analysis. Geochimica Et Cosmochimica Acta, 2015, 166, 15-28.	1.6	23
47	Long-term spatio-temporal precipitation variability in arid-zone Australia and implications for groundwater recharge. Hydrogeology Journal, 2016, 24, 905-921.	0.9	23
48	Climateâ€“groundwater dynamics inferred from GRACE and the role of hydraulic memory. Earth System Dynamics, 2020, 11, 775-791.	2.7	22
49	Rethinking groundwater age. Nature Geoscience, 2020, 13, 592-594.	5.4	21
50	The design and application of an inexpensive pressure monitoring system for shallow water level measurement, tensiometry and piezometry. Journal of Hydrology, 2009, 373, 416-425.	2.3	19
51	Local thermal non-equilibrium in sediments: Implications for temperature dynamics and the use of heat as a tracer. Advances in Water Resources, 2014, 73, 176-184.	1.7	19
52	Quantifying Compressible Groundwater Storage by Combining Crossâ€Hole Seismic Surveys and Head Response to Atmospheric Tides. Journal of Geophysical Research F: Earth Surface, 2018, 123, 1910-1930.	1.0	19
53	Rainfall recharge thresholds in a subtropical climate determined using a regional cave drip water monitoring network. Journal of Hydrology, 2020, 587, 125001.	2.3	19
54	Future-proofing hydrogeology by revising groundwater monitoring practice. Hydrogeology Journal, 2020, 28, 2963-2969.	0.9	14

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55	Technical note: Disentangling the groundwater response to Earth and atmospheric tides to improve subsurface characterisation. Hydrology and Earth System Sciences, 2020, 24, 6033-6046.	1.9	14
56	DRYP 1.0: a parsimonious hydrological model of DRYland Partitioning of the water balance. Geoscientific Model Development, 2021, 14, 6893-6917.	1.3	14
57	An irrigation experiment to compare soil, water and speleothem tetraether membrane lipid distributions. Organic Geochemistry, 2016, 94, 12-20.	0.9	11
58	Runoff and focused groundwater-recharge response to flooding rains in the arid zone of Australia. Hydrogeology Journal, 2021, 29, 737-764.	0.9	11
59	Exploring the role of hydrological pathways in modulating multi-annual climate teleconnection periodicities from UK rainfall to streamflow. Hydrology and Earth System Sciences, 2021, 25, 2223-2237.	1.9	11
60	Modern speleothem oxygen isotope hydroclimate records in water-limited SE Australia. Geochimica Et Cosmochimica Acta, 2020, 270, 431-448.	1.6	10
61	The influence of groundwater abstraction on interpreting climate controls and extreme recharge events from well hydrographs in semi-arid South Africa. Hydrogeology Journal, 2021, 29, 2773-2787.	0.9	10
62	Focused groundwater recharge in a tropical dryland: Empirical evidence from central, semi-arid Tanzania. Journal of Hydrology: Regional Studies, 2021, 37, 100919.	1.0	10
63	Constraints on sustainable development of arsenic-bearing aquifers in southern Bangladesh. Part 2: Preliminary models of arsenic variability in pumped groundwater. Geological Society Special Publication, 2002, 193, 165-179.	0.8	9
64	Solar-forced diurnal regulation of cave drip rates via phreatophyte evapotranspiration. Hydrology and Earth System Sciences, 2016, 20, 4439-4455.	1.9	9
65	Quantifying temporal variability and spatial heterogeneity in rainfall recharge thresholds in a montane karst environment. Journal of Hydrology, 2021, 594, 125965.	2.3	9
66	Nonâ€stationary control of the <scp>NAO</scp> on European rainfall and its implications for water resource management. Hydrological Processes, 2021, 35, e14099.	1.1	9
67	The Influence of Syndepositional Macropores on the Hydraulic Integrity of Thick Alluvial Clay Aquitards. Water Resources Research, 2018, 54, 3122-3138.	1.7	8
68	An inexpensive flow-through laser nephelometer for the detection of natural colloids and manufactured nanoparticles. Journal of Hydrology, 2010, 388, 112-120.	2.3	6
69	Understanding process controls on groundwater recharge variability across Africa through recharge landscapes. Journal of Hydrology, 2022, 612, 127967.	2.3	6
70	Technical Note: The use of an interrupted-flow centrifugation method to characterise preferential flow in low permeability media. Hydrology and Earth System Sciences, 2015, 19, 3991-4000.	1.9	5
71	Kinetics of urease mediated calcite precipitation and permeability reduction of porous media evidenced by magnetic resonance imaging. International Journal of Environmental Science and Technology, 2013, 10, 881-890.	1.8	5
72	Trends in arsenic concentration at tubewells in Bangladesh: conceptual models, numerical models, and monitoring proxies. Trace Metals and Other Contaminants in the Environment, 2007, 9, 63-83.	0.1	3

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73	Hydro-geomechanical characterisation of a coastal urban aquifer using multiscalar time and frequency domain groundwater-level responses. Hydrogeology Journal, 2021, 29, 2751-2771.	0.9	3
74	The importance of non-stationary multiannual periodicities in the North Atlantic Oscillation index for forecasting water resource drought. Hydrology and Earth System Sciences, 2022, 26, 2449-2467.	1.9	3
75	A Wet/Wet Differential Pressure Sensor for Measuring Vertical Hydraulic Gradient. Ground Water, 2011, 49, 781-782.	0.7	2
76	Reply to Discussion of â€˜The use of electrical resistivity tomography in deriving local-scale models of recharge through superficial depositsâ€™, by M.O. Cuthbert, R. MacKay, J.H. Tellam, R.D. Barker, Quarterly Journal of Engineering Geology and Hydrogeology, 42, 199â€“209, by M.G. Shepley & K.J. Voyce. Quarterly Journal of Engineering Geology and Hydrogeology, 2010, 43, 364-364.	0.8	1
77	Importance of the Micro-scale for the Macro-scaleâ€”What Can We Learn From Groundwater Ecosystems?. , 2021, , .		0