David E Archer

List of Publications by Year
in descending order

79 papers	12,002 citations	36271 51 h-index	71651 76 g-index
87 all docs	87 docs citations	87 times ranked	9547 citing authors

#	Article	IF	Citations
1	Geochemical Consequences of Increased Atmospheric Carbon Dioxide on Coral Reefs. Science, 1999, 284, 118-120.	6.0	1,170
2	The middle Pleistocene transition: characteristics, mechanisms, and implications for long-term changes in atmospheric pCO2. Quaternary Science Reviews, 2006, 25, 3150-3184.	1.4	827
3	Association of sinking organic matter with various types of mineral ballast in the deep sea: Implications for the rain ratio. Global Biogeochemical Cycles, 2002, 16, 63-1-63-14.	1.9	658
4	Atmospheric Lifetime of Fossil Fuel Carbon Dioxide. Annual Review of Earth and Planetary Sciences, 2009, 37, 117-134.	4.6	627
5	Effect of deep-sea sedimentary calcite preservation on atmospheric CO2 concentration. Nature, 1994, 367, 260-263.	13.7	515
6	Fate of fossil fuel CO2in geologic time. Journal of Geophysical Research, 2005, 110, .	3.3	446
7	Consequences of twenty-first-century policy for multi-millennial climate and sea-level change. Nature Climate Change, 2016, 6, 360-369.	8.1	442
8	Atmospheric Carbon Dioxide Concentration Across the Mid-Pleistocene Transition. Science, 2009, 324, 1551-1554.	6.0	411
9	What caused the glacial/interglacial atmosphericpCO2cycles?. Reviews of Geophysics, 2000, 38, 159-189.	9.0	404
10	Global inventory of methane clathrate: sensitivity to changes in the deep ocean. Earth and Planetary Science Letters, 2004, 227, 185-199.	1.8	377
11	Ocean methane hydrates as a slow tipping point in the global carbon cycle. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20596-20601.	3.3	313
12	Lifetime of Anthropogenic Climate Change: Millennial Time Scales of Potential CO2 and Surface Temperature Perturbations. Journal of Climate, 2009, 22, 2501-2511.	1.2	292
13	The millennial atmospheric lifetime of anthropogenic CO2. Climatic Change, 2008, 90, 283-297.	1.7	244
14	Multiple timescales for neutralization of fossil fuel CO2. Geophysical Research Letters, 1997, 24, 405-408.	1.5	240
15	Methane hydrate stability and anthropogenic climate change. Biogeosciences, 2007, 4, 521-544.	1.3	236
16	Dynamics of fossil fuel CO2neutralization by marine CaCO3. Global Biogeochemical Cycles, 1998, 12, 259-276.	1.9	228
17	Dissolution of calcite in deep-sea sediments: pH and O2 microelectrode results. Geochimica Et Cosmochimica Acta, 1989, 53, 2831-2845.	1.6	223
18	Benthic oxygen fluxes on the Washington shelf and slope: A comparison of in situ microelectrode and chamber flux measurements. Limnology and Oceanography, 1992, 37, 614-629.	1.6	200

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19	A data-driven model of the global calcite lysocline. Global Biogeochemical Cycles, 1996, 10, 511-526.	1.9	195
20	A model of the iron cycle in the ocean. Global Biogeochemical Cycles, 2000, 14, 269-279.	1.9	193
21	An atlas of the distribution of calcium carbonate in sediments of the deep sea. Global Biogeochemical Cycles, 1996, 10, 159-174.	1.9	187
22	Lowering of glacial atmospheric CO₂ in response to changes in oceanic circulation and marine biogeochemistry. Paleoceanography, 2007, 22, .	3.0	180
23	Modeling the impact of fronts and mesoscale circulation on the nutrient supply and biogeochemistry of the upper ocean. Journal of Geophysical Research, 2000, 105, 1209-1225.	3.3	176
24	Modeling the calcite lysocline. Journal of Geophysical Research, 1991, 96, 17037-17050.	3.3	165
25	ATMOSPHERE: An Ancient Carbon Mystery. Science, 2006, 314, 1556-1557.	6.0	162
26	A global oceanic sediment model for long-term climate studies. Global Biogeochemical Cycles, 1999, 13, 221-250.	1.9	153
27	Seasonal variations in the atmospheric O2/N2ratio in relation to the kinetics of air-sea gas exchange. Global Biogeochemical Cycles, 1998, 12, 141-163.	1.9	116
28	AtmosphericpCO2sensitivity to the biological pump in the ocean. Global Biogeochemical Cycles, 2000, 14, 1219-1230.	1.9	113
29	Respiration and dissolution in the sediments of the western North Atlantic: estimates from models of in situ microelectrode measurements of porewater oxygen and pH. Deep-Sea Research Part I: Oceanographic Research Papers, 1994, 41, 695-719.	0.6	105
30	Direct measurement of the diffusive sublayer at the deep sea floor using oxygen microelectrodes. Nature, 1989, 340, 623-626.	13.7	100
31	Geoengineering climate by stratospheric sulfur injections: Earth system vulnerability to technological failure. Climatic Change, 2009, 92, 243-259.	1.7	99
32	Long term fate of anthropogenic carbon. Geophysical Research Letters, 2007, 34, .	1.5	97
33	Equatorial Pacific Calcite Preservation Cycles: Production or Dissolution?. Paleoceanography, 1991, 6, 561-571.	3.0	93
34	The role of ocean transport in the uptake of anthropogenic CO₂. Biogeosciences, 2009, 6, 375-390.	1.3	93
35	Glacialâ€“interglacial stability of ocean pH inferred from foraminifer dissolution rates. Nature, 2002, 416, 70-73.	13.7	92
36	Glacial CO₂ cycle as a succession of key physical and biogeochemical processes. Climate of the Past, 2012, 8, 251-264.	1.3	92

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37	Global deep-sea burial rate of calcium carbonate during the Last Glacial Maximum. Paleoceanography, 1998, 13, 298-310.	3.0	90
38	Globally increased pelagic carbonate production during the Mid-Brunhes dissolution interval and the CO2 paradox of MIS 11. Quaternary Science Reviews, 2006, 25, 3278-3293.	1.4	87
39	Benthic recycling of biogenic debris in the eastern tropical Atlantic Ocean. Geochimica Et Cosmochimica Acta, 1989, 53, 2947-2960.	1.6	85
40	Time-dependent response of the global ocean clathrate reservoir to climatic and anthropogenic forcing. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	1.0	78
41	A movable trigger: Fossil fuel CO2and the onset of the next glaciation. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	1.0	77
42	The importance of ocean temperature to global biogeochemistry. Earth and Planetary Science Letters, 2004, 222, 333-348.	1.8	74
43	Gas hydrates: entrance to a methane age or climate threat?. Environmental Research Letters, 2009, 4, 034007.	2.2	73
44	Holocene carbon cycle dynamics. Geophysical Research Letters, 2010, 37, .	1.5	67
45	Variability of C02 distributions and sea-air fluxes in the central and eastern equatorial Pacific during the 199â€“1994 El NinËœo. Deep-Sea Research Part II: Topical Studies in Oceanography, 1997, 44, 1851-1867.	0.6	64
46	Modeling the impediment of methane ebullition bubbles by seasonal lake ice. Biogeosciences, 2014, 11, 6791-6811.	1.3	63
47	Organic carbon flux and organic carbon to calcite flux ratio recorded in deep-sea carbonates: Demonstration and a new proxy. Global Biogeochemical Cycles, 2002, 16, 25-1-25-15.	1.9	62
48	Coccolithophore productivity response to greenhouse event of the Paleoceneâ€“Eocene Thermal Maximum. Earth and Planetary Science Letters, 2007, 258, 192-206.	1.8	62
49	How strong is the Harvardton-Bear Constraint?. Global Biogeochemical Cycles, 1999, 13, 817-820.	1.9	61
50	Sensitivity of paleonutrient tracer distributions and deep-sea circulation to glacial boundary conditions. Paleoceanography, 1999, 14, 304-323.	3.0	58
51	Model sensitivity in the effect of Antarctic sea ice and stratification on atmospheric pCO2. Paleoceanography, 2003, 18, n/a-n/a.	3.0	56
52	Modeling the response of the oceanic Si inventory to perturbation, and consequences for atmospheric CO2. Global Biogeochemical Cycles, 2002, 16, 19-1-19-25.	1.9	50
53	A timescale for dissolved organic carbon production in equatorial Pacific surface waters. Global Biogeochemical Cycles, 1997, 11, 435-452.	1.9	49
54	Daily, seasonal and interannual variability of sea-surface carbon and nutrient concentration in the equatorial Pacific Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 1996, 43, 779-808.	0.6	45

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55	Influence of bacterial uptake on deep-ocean dissolved organic carbon. Global Biogeochemical Cycles, 2002, 16, 74-1-74-12.	1.9	45
56	A meeting place of great ocean currents: shipboard observations of a convergent front at 2Â°N in the Pacific. Deep-Sea Research Part II: Topical Studies in Oceanography, 1997, 44, 1827-1849.	0.6	42
57	Comment on â€œModernâ€•age buildup of CO₂ and its effects on seawater acidity and salinityâ€• by Hugo A. LoÃ¡iciga. Geophysical Research Letters, 2007, 34, .	1.5	36
58	Role of deep sea temperature in the carbon cycle during the last glacial. Paleoceanography, 2005, 20, n/a-n/a.	3.0	35
59	A stochastic, Lagrangian model of sinking biogenic aggregates in the ocean (SLAMS 1.0): model formulation, validation and sensitivity. Geoscientific Model Development, 2016, 9, 1455-1476.	1.3	35
60	Numerical hindcasting of sea surface pCO2 at Weathership Station Papa. Progress in Oceanography, 1993, 32, 319-351.	1.5	33
61	Upper Ocean Physics as Relevant to Ecosystem Dynamics: A Tutorial. , 1995, 5, 724-739.		33
62	Glacial carbonate dissolution cycles and atmospheric pCO₂: A view from the ocean bottom. Paleoceanography, 1992, 7, 319-331.	3.0	32
63	Modeling climatic effects of carbon dioxide emissions from Deccan Traps volcanic eruptions around the Cretaceousâ€“Paleogene boundary. Palaeogeography, Palaeoclimatology, Palaeoecology, 2017, 478, 139-148.	1.0	29
64	Rapid Environmental Change over the Past Decade Revealed by Isotopic Analysis of the California Mussel in the Northeast Pacific. PLoS ONE, 2011, 6, e25766.	1.1	21
65	Too much of a bad thing. Nature, 2009, 458, 1117-1118.	13.7	18
66	A nonlinear convolution model for the evasion of CO2injected into the deep ocean. Journal of Geophysical Research, 2004, 109, .	3.3	17
67	A model of mercury cycling and isotopic fractionation in the ocean. Biogeosciences, 2018, 15, 6297-6313.	1.3	17
68	Argon as a Tracer of Cross-Isopycnal Mixing in the Thermocline. Journal of Physical Oceanography, 2006, 36, 2090-2105.	0.7	16
69	Modeling a Limited Region of the Ocean. Journal of Computational Physics, 1998, 145, 555-574.	1.9	10
70	Subsurface ocean argon disequilibrium reveals the equatorial Pacific shadow zone. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	10
71	Checking the thermostat. Nature Geoscience, 2008, 1, 289-290.	5.4	8
72	Near miss: the importance of the natural atmospheric CO2 concentration to human historical evolution. Climatic Change, 2016, 138, 1-11.	1.7	8

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73	Effects of oceanographic changes on controlling the stability of gas hydrates and the formation of authigenic carbonates at mud volcanoes and seepage sites on the Iberian margin of the Gulf of Cadiz. Marine Geology, 2019, 412, 69-80.	0.9	7
74	The ultimate cost of carbon. Climatic Change, 2020, 162, 2069-2086.	1.7	7
75	How it went down last time. Nature Geoscience, 2010, 3, 819-820.	5.4	5
76	Winter Triticale: A Long-Term Cropping Systems Experiment in a Dry Mediterranean Climate. Agronomy, 2020, 10, 1777.	1.3	4
77	OCEAN SCIENCE: Enhanced: Who Threw That Snowball?. Science, 2003, 302, 791-792.	6.0	2
78	Modeling the evasion of CO2 injected into the deep ocean. , 1999, , 287-292.		1
79	The State of Climate Negotiations: a personal scientific commentary. Carbon Balance and Management, 2013, 8, 5.	1.4	0