Rachel A Mills

List of Publications by Year
in descending order

64 papers	3,129 citations	186265 28 h-index	155660 55 g-index
69 all docs	69 docs citations	69 times ranked	3704 citing authors

#	Article	IF	Citations
1	Southern Ocean deep-water carbon export enhanced by natural iron fertilization. Nature, 2009, 457, 577-580.	27.8	338
2	A reevaluation of the oceanic uranium budget for the Holocene. Chemical Geology, 2002, 190, 45-67.	3.3	277
3	Rare earth element geochemistry of hydrothermal deposits from the active TAG Mound, 26Â°N Mid-Atlantic Ridge. Geochimica Et Cosmochimica Acta, 1995, 59, 3511-3524.	3.9	228
4	The Discovery of New Deep-Sea Hydrothermal Vent Communities in the Southern Ocean and Implications for Biogeography. PLoS Biology, 2012, 10, e1001234.	5.6	225
5	The copper isotope geochemistry of rivers and the oceans. Earth and Planetary Science Letters, 2008, 274, 204-213.	4.4	182
6	A dual origin for the hydrothermal component in a metalliferous sediment core from the Midâ€Atlantic Ridge. Journal of Geophysical Research, 1993, 98, 9671-9681.	3.3	111
7	Four-Hundred-and-Ninety-Million-Year Record of Bacteriogenic Iron Oxide Precipitation at Sea-Floor Hydrothermal Vents. Geomicrobiology Journal, 2004, 21, 415-429.	2.0	97
8	Distinct iron isotopic signatures and supply from marine sediment dissolution. Nature Communications, 2013, 4, 2143.	12.8	97
9	Genesis of ferromanganese crusts from the TAG hydrothermal field. Chemical Geology, 2001, 176, 283-293.	3.3	94
10	Pore-fluid Fe isotopes reflect the extent of benthic Fe redox recycling: Evidence from continental shelf and deep-sea sediments. Geology, 2009, 37, 751-754.	4.4	92
11	Iron and manganese diagenesis in deep sea volcanogenic sediments and the origins of pore water colloids. Geochimica Et Cosmochimica Acta, 2011, 75, 5032-5048.	3.9	73
12	Functional diversity of bacteria in a ferruginous hydrothermal sediment. ISME Journal, 2010, 4, 1193-1205.	9.8	71
13	Dissolved oxygen and suspended particles regulate the benthic flux of iron from continental margins. Marine Chemistry, 2012, 134-135, 59-70.	2.3	70
14	Hydrothermal impacts on trace element and isotope ocean biogeochemistry. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20160035.	3.4	59
15	The origin of clay minerals in active and relict hydrothermal deposits. Geochimica Et Cosmochimica Acta, 2004, 68, 73-88.	3.9	55
16	A chemosynthetic weed: the tubeworm Sclerolinum contortum is a bipolar, cosmopolitan species. BMC Evolutionary Biology, 2015, 15, 280.	3.2	54
17	Uranium enrichment in metalliferous sediments from the Mid-Atlantic Ridge. Earth and Planetary Science Letters, 1994, 124, 35-47.	4.4	52
18	Talc-dominated seafloor deposits reveal a new class of hydrothermal system. Nature Communications, 2015, 6, 10150.	12.8	44

#	Article	IF	Citations
19	Iron colloids dominate sedimentary supply to the ocean interior. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	44
20	Biomarker indicators for anaerobic oxidizers of methane in brackish-marine sediments with diffusive methane fluxes. Organic Geochemistry, 2010, 41, 414-426.	1.8	40
21	Controls on sediment geochemistry in the Crozet region. Deep-Sea Research Part II: Topical Studies in Oceanography, 2007, 54, 2260-2274.	1.4	37
22	Lipidomics of Thalassiosira pseudonana under Phosphorus Stress Reveal Underlying Phospholipid Substitution Dynamics and Novel Diglycosylceramide Substitutes. Applied and Environmental Microbiology, 2018, 84, .	3.1	37
23	Hydrothermal sediments are a source of water column Fe and Mn in the Bransfield Strait, Antarctica. Geochimica Et Cosmochimica Acta, 2014, 137, 64-80.	3.9	36
24	Soluble iron conservation and colloidal iron dynamics in a hydrothermal plume. Chemical Geology, 2019, 511, 225-237.	3.3	34
25	The role of prokaryotes in supergene alteration of submarine hydrothermal sulfides. Earth and Planetary Science Letters, 2006, 244, 170-185.	4.4	33
26	Geochemistry of a sediment push-core from the Lucky Strike hydrothermal field, Mid-Atlantic Ridge. Chemical Geology, 2008, 247, 339-351.	3.3	33
27	Opposing authigenic controls on the isotopic signature of dissolved iron in hydrothermal plumes. Geochimica Et Cosmochimica Acta, 2017, 202, 1-20.	3.9	32
28	Mechanisms of dissolved and labile particulate iron supply to shelf waters and phytoplankton blooms off South Georgia, Southern Ocean. Biogeosciences, 2018, 15, 4973-4993.	3.3	32
29	Lead behaviour at the TAG hydrothermal vent field, 26Â°N, Mid-Atlantic Ridge. Marine Chemistry, 1994, 46, 237-254.	2.3	30
30	Uptake of dissolved oxygen during marine diagenesis of fresh volcanic material. Geochimica Et Cosmochimica Acta, 2012, 84, 353-368.	3.9	29
31	Spatial variation in fluid flow and geochemical fluxes across the sedimentâ€“seawater interface at the Carlos Ribeiro mud volcano (Gulf of Cadiz). Geochimica Et Cosmochimica Acta, 2011, 75, 1124-1144.	3.9	28
32	Geochemical and Visual Indicators of Hydrothermal Fluid Flow through a Sediment-Hosted Volcanic Ridge in the Central Bransfield Basin (Antarctica). PLoS ONE, 2013, 8, e54686.	2.5	26
33	Conductive heat flow at the TAG Active Hydrothermal Mound: Results from 1993-1995 submersible surveys. Geophysical Research Letters, 1996, 23, 3463-3466.	4.0	25
34	Authigenic carbonates from the Darwin Mud Volcano, Gulf of Cadiz: A record of palaeo-seepage of hydrocarbon bearing fluids. Chemical Geology, 2012, 300-301, 24-39.	3.3	25
35	Sulphide mineralisation in the deep sea hydrothermal vent polychaete, Alvinella pompejana: implications for fossil preservation. Marine Geology, 2002, 181, 337-356.	2.1	24
36	Authigenic barite records of methane seepage at the Carlos Ribeiro mud volcano (Gulf of Cadiz).. Chemical Geology, 2013, 354, 42-54.	3.3	23

#	Article	IF	Citations
37	Low-temperature fluid flow through sulfidic sediments from TAG: Modification of fluid chemistry and alteration of mineral deposits. Geophysical Research Letters, 1996, 23, 3495-3498.	4.0	22
38	Tracing fluidâ€“rock reaction and hydrothermal circulation at the Saldanha hydrothermal field. Chemical Geology, 2010, 273, 168-179.	3.3	21
39	Hydrothermal deposits and metalliferous sediments from TAG, 26Â°N Mid-Atlantic Ridge. Geological Society Special Publication, 1995, 87, 121-132.	1.3	19
40	The impact of oxic alteration on plume-derived transition metals in ridge flank sediments from the East Pacific Rise. Marine Geology, 2006, 229, 133-157.	2.1	19
41	Hydrothermal sediments record changes in deep water oxygen content in the SE Pacific. Paleoceanography, 2010, 25, n/a-n/a.	3.0	19
42	Hydrothermal Activity and the Geochemistry of Metalliferous Sediment. Geophysical Monograph Series, 0, , 392-407.	0.1	19
43	The role of prokaryotes in subsurface weathering of hydrothermal sediments: A combined geochemical and microbiological investigation. Geochimica Et Cosmochimica Acta, 2006, 70, 1677-1694.	3.9	18
44	Geochemical and thermal fluxes, high-temperature venting and diffuse flow from mid-ocean ridge hydrothermal systems: the TAG hydrothermal field, Mid-Atlantic Ridge 26Â°N. Geological Society Special Publication, 1993, 76, 295-307.	1.3	17
45	Diffuse Hydrothermal Venting: A Hidden Source of Iron to the Oceans. Frontiers in Marine Science, 2019, 6, .	2.5	17
46	Quantifying export production in the Southern Ocean: Implications for the Ba_{xs} proxy. Paleoceanography, 2011, 26, .	3.0	16
47	Precipitation of hydrothermal sediments on the active TAG mound: implications for ochre formation. Geological Society Special Publication, 1998, 148, 201-216.	1.3	14
48	Exploring Our Oceans: Using the Global Classroom to Develop Ocean Literacy. Frontiers in Marine Science, 2019, 6, .	2.5	14
49	Algal biomarkers in surface waters around the Crozet plateau. Organic Geochemistry, 2008, 39, 1051-1057.	1.8	13
50	Impact of volcanic ash on anammox communities in deep sea sediments. Environmental Microbiology Reports, 2014, 6, 159-166.	2.4	13
51	Further insights into how sediment redox status controls the preservation and composition of sedimentary biomarkers. Organic Geochemistry, 2014, 76, 220-234.	1.8	13
52	Geochemistry, faunal composition and trophic structure in reducing sediments on the southwest South Georgia margin. Royal Society Open Science, 2016, 3, 160284.	2.4	13
53	Tracing lowâ€temperature fluid flow on ridge flanks with sedimentary uranium distribution. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	11
54	Productivity variation around the Crozet Plateau: A naturally iron fertilised area of the Southern Ocean. Organic Geochemistry, 2010, 41, 767-778.	1.8	10

#	Article	IF	Citations
55	An Electrochemical Study of the Influence ofMarinobacter aquaeoleion the Alteration of Hydrothermal Chalcopyrite (CuFeS₂) and Pyrite (FeS₂) under Circumneutral Conditions. Geomicrobiology Journal, 2014, 31, 373-382.	2.0	10
56	The formation of goldâ€rich seafloor sulfide deposits: Evidence from the <scp>B</scp>eebe hydrothermal vent field, <scp>C</scp>ayman <scp>T</scp>rough. Geochemistry, Geophysics, Geosystems, 2017, 18, 2011-2027.	2.5	10
57	Vanadium isotope fractionation during hydrothermal sedimentation: Implications for the vanadium cycle in the oceans. Geochimica Et Cosmochimica Acta, 2022, 328, 168-184.	3.9	10
58	Biogeochemical controls on microbial diversity in seafloor sulphidic sediments. Geobiology, 2010, 8, 309-326.	2.4	7
59	Signature of organic matter exported from naturally Fe-fertilised oceanic waters. Deep-Sea Research Part I: Oceanographic Research Papers, 2012, 65, 59-72.	1.4	7
60	Hydrothermal plumes at Broken Spur, 29Â°N Mid-Atlantic Ridge: chemical and physical characteristics. Geological Society Special Publication, 1995, 87, 97-110.	1.3	5
61	Rare earth element mobility in a mineralized alteration pipe within the Troodos ophiolite, Cyprus. Geological Society Special Publication, 1998, 148, 153-176.	1.3	2
62	Brent Spar or Broken Spur?. Nature, 1995, 376, 208-208.	27.8	1
63	Brent Spar or Broken Spur?. Nature, 1995, 376, 208-208.	27.8	1
64	MEETING REPORT. 2nd International Ocean Research Conference. Oceanography, 2014, 27, 182-182.	1.0	0