

# Rachel A Mills

## List of Publications by Year in descending order

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Version: 2024-02-01

64  
papers

3,129  
citations

185998

28  
h-index

155451

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. <i>Nature</i> , 2009, 457, 577-580.	13.7	338
2	A reevaluation of the oceanic uranium budget for the Holocene. <i>Chemical Geology</i> , 2002, 190, 45-67.	1.4	277
3	Rare earth element geochemistry of hydrothermal deposits from the active TAG Mound, 26°N Mid-Atlantic Ridge. <i>Geochimica Et Cosmochimica Acta</i> , 1995, 59, 3511-3524.	1.6	228
4	The Discovery of New Deep-Sea Hydrothermal Vent Communities in the Southern Ocean and Implications for Biogeography. <i>PLoS Biology</i> , 2012, 10, e1001234.	2.6	225
5	The copper isotope geochemistry of rivers and the oceans. <i>Earth and Planetary Science Letters</i> , 2008, 274, 204-213.	1.8	182
6	A dual origin for the hydrothermal component in a metalliferous sediment core from the Mid-Atlantic Ridge. <i>Journal of Geophysical Research</i> , 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. <i>Geomicrobiology Journal</i> , 2004, 21, 415-429.	1.0	97
8	Distinct iron isotopic signatures and supply from marine sediment dissolution. <i>Nature Communications</i> , 2013, 4, 2143.	5.8	97
9	Genesis of ferromanganese crusts from the TAG hydrothermal field. <i>Chemical Geology</i> , 2001, 176, 283-293.	1.4	94
10	Pore-fluid Fe isotopes reflect the extent of benthic Fe redox recycling: Evidence from continental shelf and deep-sea sediments. <i>Geology</i> , 2009, 37, 751-754.	2.0	92
11	Iron and manganese diagenesis in deep sea volcanogenic sediments and the origins of pore water colloids. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 5032-5048.	1.6	73
12	Functional diversity of bacteria in a ferruginous hydrothermal sediment. <i>ISME Journal</i> , 2010, 4, 1193-1205.	4.4	71
13	Dissolved oxygen and suspended particles regulate the benthic flux of iron from continental margins. <i>Marine Chemistry</i> , 2012, 134-135, 59-70.	0.9	70
14	Hydrothermal impacts on trace element and isotope ocean biogeochemistry. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016, 374, 20160035.	1.6	59
15	The origin of clay minerals in active and relict hydrothermal deposits. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 73-88.	1.6	55
16	A chemosynthetic weed: the tubeworm <i>Sclerolium contortum</i> is a bipolar, cosmopolitan species. <i>BMC Evolutionary Biology</i> , 2015, 15, 280.	3.2	54
17	Uranium enrichment in metalliferous sediments from the Mid-Atlantic Ridge. <i>Earth and Planetary Science Letters</i> , 1994, 124, 35-47.	1.8	52
18	Talc-dominated seafloor deposits reveal a new class of hydrothermal system. <i>Nature Communications</i> , 2015, 6, 10150.	5.8	44

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19	Iron colloids dominate sedimentary supply to the ocean interior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	44
20	Biomarker indicators for anaerobic oxidizers of methane in brackish-marine sediments with diffusive methane fluxes. <i>Organic Geochemistry</i> , 2010, 41, 414-426.	0.9	40
21	Controls on sediment geochemistry in the Crozet region. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2007, 54, 2260-2274.	0.6	37
22	Lipidomics of <i>Thalassiosira pseudonana</i> under Phosphorus Stress Reveal Underlying Phospholipid Substitution Dynamics and Novel Diglycosylceramide Substitutes. <i>Applied and Environmental Microbiology</i> , 2018, 84, .	1.4	37
23	Hydrothermal sediments are a source of water column Fe and Mn in the Bransfield Strait, Antarctica. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 137, 64-80.	1.6	36
24	Soluble iron conservation and colloidal iron dynamics in a hydrothermal plume. <i>Chemical Geology</i> , 2019, 511, 225-237.	1.4	34
25	The role of prokaryotes in supergene alteration of submarine hydrothermal sulfides. <i>Earth and Planetary Science Letters</i> , 2006, 244, 170-185.	1.8	33
26	Geochemistry of a sediment push-core from the Lucky Strike hydrothermal field, Mid-Atlantic Ridge. <i>Chemical Geology</i> , 2008, 247, 339-351.	1.4	33
27	Opposing authigenic controls on the isotopic signature of dissolved iron in hydrothermal plumes. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 202, 1-20.	1.6	32
28	Mechanisms of dissolved and labile particulate iron supply to shelf waters and phytoplankton blooms off South Georgia, Southern Ocean. <i>Biogeosciences</i> , 2018, 15, 4973-4993.	1.3	32
29	Lead behaviour at the TAG hydrothermal vent field, 26°N, Mid-Atlantic Ridge. <i>Marine Chemistry</i> , 1994, 46, 237-254.	0.9	30
30	Uptake of dissolved oxygen during marine diagenesis of fresh volcanic material. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 84, 353-368.	1.6	29
31	Spatial variation in fluid flow and geochemical fluxes across the sediment-seawater interface at the Carlos Ribeiro mud volcano (Gulf of Cadiz). <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 1124-1144.	1.6	28
32	Geochemical and Visual Indicators of Hydrothermal Fluid Flow through a Sediment-Hosted Volcanic Ridge in the Central Bransfield Basin (Antarctica). <i>PLoS ONE</i> , 2013, 8, e54686.	1.1	26
33	Conductive heat flow at the TAG Active Hydrothermal Mound: Results from 1993-1995 submersible surveys. <i>Geophysical Research Letters</i> , 1996, 23, 3463-3466.	1.5	25
34	Authigenic carbonates from the Darwin Mud Volcano, Gulf of Cadiz: A record of palaeo-seepage of hydrocarbon bearing fluids. <i>Chemical Geology</i> , 2012, 300-301, 24-39.	1.4	25
35	Sulphide mineralisation in the deep sea hydrothermal vent polychaete, <i>Alvinella pompejana</i> : implications for fossil preservation. <i>Marine Geology</i> , 2002, 181, 337-356.	0.9	24
36	Authigenic barite records of methane seepage at the Carlos Ribeiro mud volcano (Gulf of Cadiz).. <i>Chemical Geology</i> , 2013, 354, 42-54.	1.4	23

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37	Low-temperature fluid flow through sulfidic sediments from TAG: Modification of fluid chemistry and alteration of mineral deposits. <i>Geophysical Research Letters</i> , 1996, 23, 3495-3498.	1.5	22
38	Tracing fluid-rock reaction and hydrothermal circulation at the Saldanha hydrothermal field. <i>Chemical Geology</i> , 2010, 273, 168-179.	1.4	21
39	Hydrothermal deposits and metalliferous sediments from TAG, 26°N Mid-Atlantic Ridge. <i>Geological Society Special Publication</i> , 1995, 87, 121-132.	0.8	19
40	The impact of oxic alteration on plume-derived transition metals in ridge flank sediments from the East Pacific Rise. <i>Marine Geology</i> , 2006, 229, 133-157.	0.9	19
41	Hydrothermal sediments record changes in deep water oxygen content in the SE Pacific. <i>Paleoceanography</i> , 2010, 25, n/a-n/a.	3.0	19
42	Hydrothermal Activity and the Geochemistry of Metalliferous Sediment. <i>Geophysical Monograph Series</i> , 0, , 392-407.	0.1	19
43	The role of prokaryotes in subsurface weathering of hydrothermal sediments: A combined geochemical and microbiological investigation. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 1677-1694.	1.6	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 26°N. <i>Geological Society Special Publication</i> , 1993, 76, 295-307.	0.8	17
45	Diffuse Hydrothermal Venting: A Hidden Source of Iron to the Oceans. <i>Frontiers in Marine Science</i> , 2019, 6, .	1.2	17
46	Quantifying export production in the Southern Ocean: Implications for the Ba <sub>xs</sub> proxy. <i>Paleoceanography</i> , 2011, 26, .	3.0	16
47	Precipitation of hydrothermal sediments on the active TAG mound: implications for ochre formation. <i>Geological Society Special Publication</i> , 1998, 148, 201-216.	0.8	14
48	Exploring Our Oceans: Using the Global Classroom to Develop Ocean Literacy. <i>Frontiers in Marine Science</i> , 2019, 6, .	1.2	14
49	Algal biomarkers in surface waters around the Crozet plateau. <i>Organic Geochemistry</i> , 2008, 39, 1051-1057.	0.9	13
50	Impact of volcanic ash on anammox communities in deep sea sediments. <i>Environmental Microbiology Reports</i> , 2014, 6, 159-166.	1.0	13
51	Further insights into how sediment redox status controls the preservation and composition of sedimentary biomarkers. <i>Organic Geochemistry</i> , 2014, 76, 220-234.	0.9	13
52	Geochemistry, faunal composition and trophic structure in reducing sediments on the southwest South Georgia margin. <i>Royal Society Open Science</i> , 2016, 3, 160284.	1.1	13
53	Tracing low-temperature fluid flow on ridge flanks with sedimentary uranium distribution. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	1.0	11
54	Productivity variation around the Crozet Plateau: A naturally iron fertilised area of the Southern Ocean. <i>Organic Geochemistry</i> , 2010, 41, 767-778.	0.9	10

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55	An Electrochemical Study of the Influence of <i>Marinobacter aquaeolei</i> on the Alteration of Hydrothermal Chalcopyrite (CuFeS <sub>2</sub> ) and Pyrite (FeS <sub>2</sub> ) under Circumneutral Conditions. <i>Geomicrobiology Journal</i> , 2014, 31, 373-382.	1.0	10
56	The formation of gold-rich seafloor sulfide deposits: Evidence from the Bebe hydrothermal vent field, Cameroon. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 2011-2027.	1.0	10
57	Vanadium isotope fractionation during hydrothermal sedimentation: Implications for the vanadium cycle in the oceans. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 328, 168-184.	1.6	10
58	Biogeochemical controls on microbial diversity in seafloor sulphidic sediments. <i>Geobiology</i> , 2010, 8, 309-326.	1.1	7
59	Signature of organic matter exported from naturally Fe-fertilised oceanic waters. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2012, 65, 59-72.	0.6	7
60	Hydrothermal plumes at Broken Spur, 29°N Mid-Atlantic Ridge: chemical and physical characteristics. <i>Geological Society Special Publication</i> , 1995, 87, 97-110.	0.8	5
61	Rare earth element mobility in a mineralized alteration pipe within the Troodos ophiolite, Cyprus. <i>Geological Society Special Publication</i> , 1998, 148, 153-176.	0.8	2
62	Brent Spar or Broken Spur?. <i>Nature</i> , 1995, 376, 208-208.	13.7	1
63	Brent Spar or Broken Spur?. <i>Nature</i> , 1995, 376, 208-208.	13.7	1
64	MEETING REPORT. 2nd International Ocean Research Conference. <i>Oceanography</i> , 2014, 27, 182-182.	0.5	0