Robert Aller

List of Publications by Year in descending order

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		16411	20307
134	13,919	64	116
papers	citations	h-index	g-index
135	135	135	8565
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Diffusion coefficients in nearshore marine sediments1. Limnology and Oceanography, 1982, 27, 552-556.	1.6	757
2	Bioturbation and remineralization of sedimentary organic matter: effects of redox oscillation. Chemical Geology, 1994, 114, 331-345.	1.4	640
3	The Fate of Terrestrial Organic Carbon in the Marine Environment. Annual Review of Marine Science, 2012, 4, 401-423.	5.1	482
4	Rapid, small-volume, flow injection analysis for SCO2, and NH4+ in marine and freshwaters. Limnology and Oceanography, 1992, 37, 1113-1119.	1.6	452
5	Coastal ocean acidification: The other eutrophication problem. Estuarine, Coastal and Shelf Science, 2014, 148, 1-13.	0.9	417
6	Complete oxidation of solid phase sulfides by manganese and bacteria in anoxic marine sediments. Geochimica Et Cosmochimica Acta, 1988, 52, 751-765.	1.6	355
7	The effect of biogenic irrigation intensity and solute exchange on diagenetic reaction rates in marine sediments. Journal of Marine Research, 1998, 56, 905-936.	0.3	349
8	Sulfate reduction, diffusion, and bioturbation in Long Island Sound sediments; report of the FOAM Group. Numerische Mathematik, 1977, 277, 193-237.	0.7	328
9	Quantifying solute distributions in the bioturbated zone of marine sediments by defining an average microenvironment. Geochimica Et Cosmochimica Acta, 1980, 44, 1955-1965.	1.6	327
10	Rapid Clay Mineral Formation in Amazon Delta Sediments: Reverse Weathering and Oceanic Elemental Cycles. Science, 1995, 270, 614-617.	6.0	324
11	Mobile deltaic and continental shelf muds as suboxic, fluidized bed reactors. Marine Chemistry, 1998, 61, 143-155.	0.9	305
12	234Th/238U disequilibrium in near-shore sediment: Particle reworking and diagenetic time scales. Earth and Planetary Science Letters, 1976, 29, 37-50.	1.8	265
13	Anaerobic ammonium oxidation by nitrite (anammox): Implications for N2 production in coastal marine sediments. Geochimica Et Cosmochimica Acta, 2005, 69, 2057-2065.	1.6	255
14	Carbonate Dissolution in Nearshore Terrigenous Muds: The Role of Physical and Biological Reworking. Journal of Geology, 1982, 90, 79-95.	0.7	246
15	Coupled anoxic nitrification/manganese reduction in marine sediments. Geochimica Et Cosmochimica Acta, 1999, 63, 49-66.	1.6	235
16	Early diagenesis of biogenic silica in the Amazon delta: alteration, authigenic clay formation, and storage. Geochimica Et Cosmochimica Acta, 2004, 68, 1061-1085.	1.6	234
17	Ammonium adsorption in marine sediments1. Limnology and Oceanography, 1984, 29, 250-257.	1.6	231
18	Evidence for localized enhancement of biological associated with tube and burrow structures in deep-sea sediments at the HEEBLE site, western North Atlantic. Deep-sea Research Part A, Oceanographic Research Papers, 1986, 33, 755-790.	1.6	231

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19	Effects of the marine deposit-feeders <l>Heteromastus filiformis</l> (Polychaeta), <l>Macoma balthica</l> (Bivalvia), and <l>Tellina texana</l> (Bivalvia) on averaged sedimentary solute transport, reaction rates, and microbial distributions. Journal of Marine Research, 1985, 43, 615-645.	0.3	224
20	Meiofauna and solute transport in marine muds. Limnology and Oceanography, 1992, 37, 1018-1033.	1.6	203
21	The sedimentary Mn cycle in Long Island Sound: Its role as intermediate oxidant and the influence of bioturbation, O ₂ , and C _{org} flux on diagenetic reaction balances. Journal of Marine Research, 1994, 52, 259-295.	0.3	200
22	Early diagenesis of chlorophyll-<1>a 1 in Long Island Sound sediments: A measure of carbon flux and particle reworking. Journal of Marine Research, 1991, 49, 379-401.	0.3	185
23	Coral Growth Related to Resuspension of Bottom Sediments. Nature, 1974, 247, 574-577.	13.7	182
24	Carbon remineralization in the Amazon–Guianas tropical mobile mudbelt: A sedimentary incinerator. Continental Shelf Research, 2006, 26, 2241-2259.	0.9	181
25	Laboratory studies of oxic and anoxic degradation of chlorophyll-a in Long Island Sound sediments. Geochimica Et Cosmochimica Acta, 1993, 57, 147-157.	1.6	176
26	The importance of the diffusive permeability of animal burrow linings in determining marine sediment chemistry. Journal of Marine Research, 1983, 41, 299-322.	0.3	164
27	Diagenetic Processes Near the Sediment-Water Interface of Long Island Sound. II. Fe and Mn. Advances in Geophysics, 1980, 22, 351-415.	1.1	160
28	From bedrock to burial: the evolution of particulate organic carbon across coupled watershed-continental margin systems. Marine Chemistry, 2004, 92, 141-156.	0.9	155
29	Origin of Amazon mudbanks along the northeastern coast of South America. Marine Geology, 2000, 163, 241-256.	0.9	148
30	Importance of suspended participates in riverine delivery of bioavailable nitrogen to coastal zones. Global Biogeochemical Cycles, 1998, 12, 573-579.	1.9	142
31	Nitrogen removal in marine environments: recent findings and future research challenges. Marine Chemistry, 2005, 94, 125-145.	0.9	142
32	Anaerobic methane oxidation on the Amazon shelf. Geochimica Et Cosmochimica Acta, 1995, 59, 3707-3715.	1.6	131
33	Direct measurement of dissolved inorganic nitrogen exchange and denitrification in individual polychaete (<l>Nereis virens</l>) burrows. Journal of Marine Research, 1991, 49, 355-377.	0.3	129
34	Unsteady diagenetic processes and sulfur biogeochemistry in tropical deltaic muds: Implications for oceanic isotope cycles and the sedimentary record. Geochimica Et Cosmochimica Acta, 2010, 74, 4671-4692.	1.6	129
35	Early chemical diagenesis, sediment-water solute exchange, and storage of reactive organic matter near the mouth of the Changjiang, East China Sea. Continental Shelf Research, 1985, 4, 227-251.	0.9	124
36	Effects of oxygen and redox oscillation on degradation of cell-associated lipids in surficial marine sediments. Geochimica Et Cosmochimica Acta, 2002, 66, 2003-2012.	1.6	121

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37	Tracking particle-associated processes in nearshore environments by use of 234Th/238U disequilibrium. Earth and Planetary Science Letters, 1980, 47, 161-175.	1.8	120
38	Two-dimensional pH distributions and dynamics in bioturbated marine sediments. Geochimica Et Cosmochimica Acta, 2006, 70, 4933-4949.	1.6	118
39	Early diagenetic remineralization of sedimentary organic C in the Gulf of Papua deltaic complex (Papua) Tj ETQq1 Cosmochimica Acta, 2004, 68, 1815-1825.	1 0.78431 1.6	116 I 4 rgBT 4 r
40	Dissolved Al in sediments and waters of the East China Sea: Implications for authigenic mineral formation. Geochimica Et Cosmochimica Acta, 1984, 48, 281-297.	1.6	112
41	Comparative biogeochemistry of water in intertidal <l>Onuphis</l> (polychaeta) and <l>Upogebia</l> (crustacea) burrows: temporal patterns and causes. Journal of Marine Research, 1983, 41, 571-604.	0.3	110
42	The influence of macrofaunal burrow spacing and diffusive scaling on sedimentary nitrification and denitrification: An experimental simulation and model approach. Journal of Marine Research, 2003, 61, 101-125.	0.3	104
43	Coupling between sedimentary dynamics, early diagenetic processes, and biogeochemical cycling in the Amazon–Guianas mobile mud belt: coastal French Guiana. Marine Geology, 2004, 208, 331-360.	0.9	104
44	Anoxic and oxic degradation of ¹⁴ C″abeled chloropigments and a ¹⁴ C″abeled diatom in Long Island Sound sediments. Limnology and Oceanography, 1993, 38, 1438-1451.	1.6	102
45	A pH plate fluorosensor (optode) for early diagenetic studies of marine sediments. Limnology and Oceanography, 2002, 47, 212-220.	1.6	102
46	Biogeochemical heterogeneity and suboxic diagenesis in hemipelagic sediments of the Panama Basin. Deep-Sea Research Part I: Oceanographic Research Papers, 1998, 45, 133-165.	0.6	101
47	Conceptual models of early diagenetic processes: The muddy seafloor as an unsteady, batch reactor. Journal of Marine Research, 2004, 62, 815-835.	0.3	99
48	Spatial and temporal distributions of sedimentary chloropigments as indicators of benthic processes in Long Island Sound. Journal of Marine Research, 1994, 52, 149-176.	0.3	95
49	Conversion of diatoms to clays during early diagenesis in tropical, continental shelf muds. Geology, 2000, 28, 1095.	2.0	95
50	Estimates of particle flux and reworking at the deep-sea floor using234Th/238U disequilibrium. Earth and Planetary Science Letters, 1984, 67, 308-318.	1.8	93
51	Infaunal density, biomass and bioturbation in the sediments of the Arctic Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 1997, 44, 1683-1704.	0.6	93
52	Fluorine mobility during early diagenesis of carbonate sediment: An indicator of mineral transformations. Geochimica Et Cosmochimica Acta, 1991, 55, 2491-2509.	1.6	92
53	Carbonate dissolution and temporal abundances of Foraminifera in Long Island Sound sediments. Limnology and Oceanography, 1993, 38, 331-345.	1.6	88
54	The importance of relict burrow structures and burrow irrigation in controlling sedimentary solute distributions. Geochimica Et Cosmochimica Acta, 1984, 48, 1929-1934.	1.6	86

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55	General characteristics of benthic faunas on the Amazon inner continental shelf with comparison to the shelf off the Changjiang River, East China Sea. Continental Shelf Research, 1986, 6, 291-310.	0.9	81
56	Dissolved iodine flux from estuarine sediments and implications for the enrichment of iodine at the sediment water interface. Geochimica Et Cosmochimica Acta, 1980, 44, 1177-1184.	1.6	78
57	Paleoceanographic significance of sediment color on western North Atlantic drifts: I. Origin of color. Marine Geology, 2002, 189, 25-41.	0.9	78
58	Organic matter flux and reactivity on a South Carolina sandflat: The impacts of porewater advection and macrobiological structures. Limnology and Oceanography, 2002, 47, 1056-1070.	1.6	77
59	High-Performance Planar pH Fluorosensor for Two-Dimensional pH Measurements in Marine Sediment and Water. Environmental Science & Technology, 2005, 39, 8906-8911.	4.6	74
60	Coupling of early diagenetic processes and sedimentary dynamics in tropical shelf environments: the Gulf of Papua deltaic complex. Continental Shelf Research, 2004, 24, 2455-2486.	0.9	72
61	Early diagenetic cycling, incineration, and burial of sedimentary organic carbon in the central Gulf of Papua (Papua New Guinea). Journal of Geophysical Research, 2008, 113, .	3.3	71
62	Organic matter diagenesis in shallow water carbonate sediments. Geochimica Et Cosmochimica Acta, 2004, 68, 4363-4379.	1.6	70
63	The Missing Silica Sink: Revisiting the Marine Sedimentary Si Cycle Using Cosmogenic ³² Si. Global Biogeochemical Cycles, 2017, 31, 1559-1578.	1.9	70
64	Processes affecting the behavior of dissolved aluminum in estuarine waters. Marine Chemistry, 1984, 14, 213-232.	0.9	69
65	Diagenesis of dissolved aluminum in organic-rich estuarine sediments. Geochimica Et Cosmochimica Acta, 1984, 48, 299-313.	1.6	69
66	An evaluation of sedimentary molybdenum and iron as proxies for pore fluid paleoredox conditions. Numerische Mathematik, 2018, 318, 527-556.	0.7	63
67	The geochemistry of iodine in near-shore carbonate sediments. Geochimica Et Cosmochimica Acta, 1985, 49, 967-978.	1.6	62
68	Enhanced degradation of algal lipids by benthic macrofaunal activity: Effect of <i>Yoldia limatula</i> . Journal of Marine Research, 1999, 57, 775-804.	0.3	62
69	The Critical Role of Bioturbation for Particle Dynamics, Priming Potential, and Organic C Remineralization in Marine Sediments: Local and Basin Scales. Frontiers in Earth Science, 2019, 7, .	0.8	61
70	A new ratiometric, planar fluorosensor for measuring high resolution, two-dimensional pCO2 distributions in marine sediments. Marine Chemistry, 2006, 101, 40-53.	0.9	59
71	Biogeochemistry of Nonylphenol Ethoxylates in Urban Estuarine Sediments. Environmental Science & Technology, 2003, 37, 3499-3506.	4.6	57
72	Calcification in the bivalve periostracum. Lethaia, 1975, 8, 315-320.	0.6	55

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73	The effects of clay mineral reactions on dissolved Al distributions in sediments and waters of the Amazon continental shelf. Continental Shelf Research, 1986, 6, 245-262.	0.9	53
74	High prokaryote diversity and analysis of community structure in mobile mud deposits off French Guiana: identification of two new bacterial candidate divisions. FEMS Microbiology Ecology, 2001, 37, 197-209.	1.3	52
75	Cosmogenic ³² Si as a tracer of biogenic silica burial and diagenesis: Major deltaic sinks in the silica cycle. Geophysical Research Letters, 2016, 43, 7124-7132.	1.5	50
76	Particle reworking in sediments from the New York Bight apex: Evidence from 234Th/238U disequilibrium. Estuarine and Coastal Marine Science, 1979, 9, 739-IN4.	0.9	49
77	Seasonal patterns of carbonate diagenesis in nearshore terrigenous muds: Relation to spring phytoplankton bloom and temperature. Journal of Marine Research, 1998, 56, 1097-1123.	0.3	48
78	The Sources and Sinks of Nuclides in Long Island Sound. Advances in Geophysics, 1980, 22, 129-164.	1.1	45
79	Biological activity and associated sedimentary structures in HEBBLE-area deposits, western North Atlantic. Marine Geology, 1982, 48, M7-M15.	0.9	44
80	Sulfur diagenesis and burial on the Amazon shelf: Major control by physical sedimentation processes. Geo-Marine Letters, 1996, 16, 3-10.	0.5	44
81	The influence of deposit-feeding on chlorophyll- <i>a</i> degradation in coastal marine sediments. Journal of Marine Research, 2000, 58, 631-651.	0.3	44
82	Physical disturbance creates bacterial dominance of benthic biological communities in tropical deltaic environments of the Gulf of Papua. Continental Shelf Research, 2004, 24, 2395-2416.	0.9	44
83	Redox speciation and early diagenetic behavior of dissolved molybdenum in sulfidic muds. Marine Chemistry, 2011, 125, 101-107.	0.9	43
84	The sources and distribution of carbon (DOC, POC, DIC) in a mangrove dominated estuary (French) Tj ETQq0 0 C) rgBT /Ove	erlock 10 Tf 5
85	Effects of gut chemistry in marine bivalves on the assimilation of metals from ingested sediment particles. Journal of Marine Research, 2002, 60, 101-120.	0.3	40
86	Physical irrigation of relict burrows: Implications for sediment chemistry. Marine Geology, 1985, 62, 371-379.	0.9	39
87	Two-dimensional dissolved ferrous iron distributions in marine sediments as revealed by a novel planar optical sensor. Marine Chemistry, 2012, 136-137, 14-23.	0.9	39
88	Worm tubes as conduits for the electrogenic microbial grid in marine sediments. Science Advances, 2019, 5, eaaw3651.	4.7	38
89	Sedimentary organic matter distributions, burrowing activity, and biogeochemical cycling: Natural patterns and experimental artifacts. Estuarine, Coastal and Shelf Science, 2010, 90, 21-34.	0.9	37
	Farly diagenesis of calcium carbonate in Long Island Sound sediments: Renthic fluxes of		

Early diagenesis of calcium carbonate in Long Island Sound sediments: Benthic fluxes of Ca²⁺ and minor elements during seasonal periods of net dissolution. Journal of Marine Research, 2001, 59, 769-794.

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91	The effects of iron reduction and nonsteady-state diagenesis on iodine, ammonium, and boron distributions in sediments from the Amazon continental shelf. Continental Shelf Research, 1988, 8, 363-386.	0.9	34
92	Spatial interactions in the <i>Macoma balthica</i> community control biogeochemical fluxes at the sediment-water interface and microbial abundances. Journal of Marine Research, 2009, 67, 43-70.	0.3	34
93	Prefabrication of shell ornamentation in the bivalve <i>Laternula</i> . Lethaia, 1974, 7, 43-56.	0.6	32
94	Diffusion of organic and inorganic solutes through macrofaunal mucus secretions and tube linings in marine sediments. Journal of Marine Research, 2005, 63, 957-981.	0.3	32
95	A new method for the quantification of different redox-species of molybdenum (V and VI) in seawater. Marine Chemistry, 2009, 113, 250-256.	0.9	32
96	Impact of seasonal hypoxia on diagenesis of phytol and its derivatives in Long Island Sound. Marine Chemistry, 1998, 62, 157-173.	0.9	31
97	Stable carbon isotope cycling in mobile coastal muds of AmapÃį, Brazil. Continental Shelf Research, 2002, 22, 2065-2079.	0.9	31
98	Preservation of reactive organic matter in marine sediments. Earth and Planetary Science Letters, 1984, 70, 260-266.	1.8	30
99	Rapid physical and biological particle mixing on an intertidal sandflat. Journal of Marine Research, 2004, 62, 67-92.	0.3	30
100	Biogeochemical Processes in Amazon Shelf Sediments. Oceanography, 1991, 4, 27-32.	0.5	29
101	Fluorine uptake by Amazon continental shelf sediment and its impact on the global fluorine cycle. Continental Shelf Research, 1994, 14, 883-907.	0.9	29
102	Oxic and anoxic decomposition of tubes from the burrowing sea anemone <l>Ceriantheopsis americanus:</l> Implications for bulk sediment carbon and nitrogen balance. Journal of Marine Research, 1991, 49, 589-617.	0.3	27
103	Experimental evaluation of the influences of biogenic reworking on carbonate preservation in nearshore sediments. Marine Geology, 1992, 107, 175-181.	0.9	25
104	Influence of carbonate dissolution on survival of shellâ€bearing meiobenthos in nearshore sediments. Limnology and Oceanography, 1998, 43, 18-28.	1.6	25
105	Fluidized muds: a novel setting for the generation of biosphere diversity through geologic time*. Geobiology, 2010, 8, 169-178.	1.1	24
106	Planar fluorescence sensors for two-dimensional measurements of H2S distributions and dynamics in sedimentary deposits. Marine Chemistry, 2013, 157, 49-58.	0.9	23
107	An In Situ Multispectral Imaging System for Planar Optodes in Sediments: Examples of High-Resolution Seasonal Patterns of pH. Aquatic Geochemistry, 2011, 17, 457-471.	1.5	20
108	Evidence of the activity of dissimilatory sulfate-reducing prokaryotes in nonsulfidogenic tropical mobile muds. FEMS Microbiology Ecology, 2006, 57, 169-181.	1.3	19

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109	Glacial controls on redox-sensitive trace element cycling in Arctic fjord sediments (Spitsbergen,) Tj ETQq1 1 0.78	34314 rgBT 1.6	/Qyerlock 1
110	A rapid response, planar fluorosensor for measuring twoâ€dimensional <i>p</i> CO ₂ distributions and dynamics in marine sediments. Limnology and Oceanography: Methods, 2010, 8, 326-336.	1.0	18
111	Priming effect of benthic gastropod mucus on sedimentary organic matter remineralization. Limnology and Oceanography, 2016, 61, 1640-1650.	1.6	18
112	An irreversible planar optical sensor for multi-dimensional measurements of sedimentary H2S. Marine Chemistry, 2017, 195, 143-152.	0.9	17
113	The infinite dilution diffusion coefficient for A1(OH)4â^ at 25°C. Geochimica Et Cosmochimica Acta, 1983, 47, 959-961.	1.6	16
114	Analysis of vitamin B ₁₂ in seawater and marine sediment porewater using ELISA. Limnology and Oceanography: Methods, 2011, 9, 515-523.	1.0	14
115	A fluorosensor for two-dimensional measurements of extracellular enzyme activity in marine sediments. Marine Chemistry, 2011, 123, 23-31.	0.9	12
116	Benthic iron flux influenced by climateâ€sensitive interplay between organic carbon availability and sedimentation rate in Arctic fjords. Limnology and Oceanography, 2021, 66, 3374-3392.	1.6	11
117	Biological indicators of sedimentary dynamics in the central Gulf of Papua: Seasonal and decadal perspectives. Journal of Geophysical Research, 2008, 113, .	3.3	10
118	Drying effects on decomposition of salt marsh sediment and on lysine sorption. Journal of Marine Research, 2008, 66, 665-689.	0.3	10
119	Sediment reworking by the burrowing polychaete Hediste diversicolor modulated by environmental and biological factors across the temperate North Atlantic. A tribute to Gaston Desrosiers. Journal of Experimental Marine Biology and Ecology, 2021, 541, 151588.	0.7	10
120	Medically-Derived ¹³¹ I as a Tool for Investigating the Fate of Wastewater Nitrogen in Aquatic Environments. Environmental Science & Technology, 2015, 49, 10312-10319.	4.6	9
121	The dynamics of cable bacteria colonization in surface sediments: a 2D view. Scientific Reports, 2021, 11, 7167.	1.6	9
122	A new spectrophotometric method to quantify dissolved manganese in marine pore waters. Marine Chemistry, 2011, 127, 56-63.	0.9	8
123	Seasonal, 2-D sedimentary extracellular enzyme activities and controlling processes in Great Peconic Bay, Long Island. Journal of Marine Research, 2013, 71, 399-423.	0.3	8
124	N2 production and fixation in deep-tier burrows of Squilla empusa in muddy sediments of Great Peconic Bay. Journal of Sea Research, 2017, 129, 36-41.	0.6	6
125	Tight benthic-pelagic coupling drives seasonal and interannual changes in ironâ€ʿsulfur cycling in Arctic fjord sediments (Kongsfjorden, Svalbard). Journal of Marine Systems, 2021, , 103645.	0.9	5
126	Buffering muds with bivalve shell significantly increases the settlement, growth, survival, and burrowing of the early life stages of the Northern quahog, Mercenaria mercenaria, and other calcifying invertebrates. Estuarine, Coastal and Shelf Science, 2022, 264, 107686.	0.9	5

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127	Conversion of diatoms to clays during early diagenesis in tropical, continental shelf muds. Geology, 2000, 28, 1095-1098.	2.0	4
128	Density and size-dependent bioturbation effects of the infaunal polychaete <i> Nephtys incisa</i> on sediment biogeochemistry and solute exchange. Journal of Marine Research, 2021, 79, 181-220.	0.3	4
129	Chemistry and Biogeochemistry of Estuaries. Geochimica Et Cosmochimica Acta, 1981, 45, 780.	1.6	0
130	Quantifying sedimentary geochemical processes. Geochimica Et Cosmochimica Acta, 1995, 59, 4786.	1.6	0
131	Editor's Commentary: On the Oxidation of Organic Matter In Marine Sediments by Bacteria By Selman A. Waksman and Margaret Hotchkiss. Journal of Marine Research, 2020, 78, 149-149.	0.3	0
132	Editor's Commentary: The influence of deposit-feeding organisms on sediment stability and community trophic structure by Donald C. Rhoads and David K. Young. Journal of Marine Research, 2020, 78, 167-167.	0.3	0
133	Nitrogen cycling in muddy sediments of Great Peconic Bay, USA: Seasonal N reaction balances and multi-year flux patterns. Journal of Marine Research, 2021, 79, 149-179.	0.3	0
134	<i>Microbial Geochemistry</i> . W. E. Krumbein. Journal of Geology, 1985, 93, 623-623.	0.7	0