James R Hein

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/10985495/publications.pdf

Version: 2024-02-01

120 papers	6,604 citations	57631 44 h-index	69108 77 g-index
123 all docs	123 docs citations	123 times ranked	4132 citing authors

#	Article	IF	Citations
1	Deep-ocean mineral deposits as a source of critical metals for high- and green-technology applications: Comparison with land-based resources. Ore Geology Reviews, 2013, 51, 1-14.	1.1	700
2	Comparison of the partitioning behaviours of yttrium, rare earth elements, and titanium between hydrogenetic marine ferromanganese crusts and seawater. Geochimica Et Cosmochimica Acta, 1996, 60, 1709-1725.	1.6	504
3	Uptake of elements from seawater by ferromanganese crusts: solid-phase associations and seawater speciation. Marine Geology, 2003, 198, 331-351.	0.9	376
4	Diagenesis of late Cenozoic diatomaceous deposits and formation of the bottom simulating reflector in the southern Bering Sea*. Sedimentology, 1978, 25, 155-181.	1.6	218
5	Deep-ocean polymetallic nodules as a resource for critical materials. Nature Reviews Earth & Environment, 2020, 1, 158-169.	12.2	179
6	Global occurrence of tellurium-rich ferromanganese crusts and a model for the enrichment of tellurium. Geochimica Et Cosmochimica Acta, 2003, 67, 1117-1127.	1.6	146
7	Iron and manganese oxide mineralization in the Pacific. Geological Society Special Publication, 1997, 119, 123-138.	0.8	145
8	Two Major Cenozoic Episodes of Phosphogenesis Recorded in Equatorial Pacific Seamount Deposits. Paleoceanography, 1993, 8, 293-311.	3.0	136
9	North Atlantic Deep Water export to the Southern Ocean over the past 14 Myr: Evidence from Nd and Pb isotopes in ferromanganese crusts. Paleoceanography, 2002, 17, 12-1-12-9.	3.0	129
10	Cobalt- and platinum-rich ferromanganese crusts and associated substrate rocks from the Marshall Islands. Marine Geology, 1988, 78, 255-283.	0.9	122
11	Climate and Ocean Dynamics and the Lead Isotopic Records in Pacific Ferromanganese Crusts. Science, 1997, 277, 913-918.	6.0	122
12	Critical metals in manganese nodules from the Cook Islands EEZ, abundances and distributions. Ore Geology Reviews, 2015, 68, 97-116.	1.1	115
13	New constraints on the sources and behavior of neodymium and hafnium in seawater from Pacific Ocean ferromanganese crusts. Geochimica Et Cosmochimica Acta, 2004, 68, 3827-3843.	1.6	113
14	Thallium isotope evidence for a permanent increase in marine organic carbon export in the early Eocene. Earth and Planetary Science Letters, 2009, 278, 297-307.	1.8	106
15	Sources, Dispersal, and Clay Mineral Composition of Fine-Grained Sediment off Central and Northern California. Journal of Geology, 1980, 88, 541-566.	0.7	101
16	The molecular mechanism of Mo isotope fractionation during adsorption to birnessite. Geochimica Et Cosmochimica Acta, 2011, 75, 5019-5031.	1.6	97
17	Hafnium Isotope Stratigraphy of Ferromanganese Crusts. Science, 1999, 285, 1052-1054.	6.0	95
18	Osmium isotope variations in the oceans recorded by FeMn crusts. Earth and Planetary Science Letters, 1999, 171, 185-197.	1.8	95

#	Article	IF	Citations
19	Composition and origin of hydrothermal ironstones from central Pacific seamounts. Geochimica Et Cosmochimica Acta, 1994, 58, 179-189.	1.6	92
20	Origin of Iron-Rich Montmorillonite from the Manganese Nodule Belt of the North Equatorial Pacific. Clays and Clay Minerals, 1979, 27, 185-194.	0.6	90
21	Variations in the Fineâ€Scale Composition of a Central Pacific Ferromanganese Crust: Paleoceanographic Implications. Paleoceanography, 1992, 7, 63-77.	3.0	87
22	Seamount Characteristics and Mine-Site Model Applied to Exploration- and Mining-Lease-Block Selection for Cobalt-Rich Ferromanganese Crusts. Marine Georesources and Geotechnology, 2009, 27, 160-176.	1.2	85
23	Diffuse flow hydrothermal manganese mineralization along the active Mariana and southern Izuâ€Bonin arc system, western Pacific. Journal of Geophysical Research, 2008, 113, .	3.3	83
24	Diagenesis and distribution of late Cenozoic volcanic sediment in the southern Bering Sea. Bulletin of the Geological Society of America, 1978, 89, 197.	1.6	77
25	Ferromanganese crusts from Necker Ridge, Horizon Guyot and S.P. Lee Guyot: Geological considerations. Marine Geology, 1985, 69, 25-54.	0.9	73
26	Actual timing of neodymium isotopic variations recorded by FeMn crusts in the western North Atlantic. Earth and Planetary Science Letters, 1999, 171, 149-156.	1.8	72
27	Deep and bottom water export from the Southern Ocean to the Pacific over the past 38 million years. Paleoceanography, 2004, 19, n/a-n/a.	3.0	72
28	Bacterially mediated diagenetic origin for chert-hosted manganese deposits in the Franciscan Complex, California Coast Ranges. Geology, 1987, 15, 722.	2.0	65
29	Changes in erosion and ocean circulation recorded in the Hf isotopic compositions of North Atlantic and Indian Ocean ferromanganese crusts. Earth and Planetary Science Letters, 2000, 181, 315-325.	1.8	65
30	Marine Ferromanganese Encrustations: Archives of Changing Oceans. Elements, 2017, 13, 177-182.	0.5	64
31	Coral reef evolution on rapidly subsiding margins. Global and Planetary Change, 2009, 66, 129-148.	1.6	63
32	Controls on ferromanganese crust composition and reconnaissance resource potential, Ninetyeast Ridge, Indian Ocean. Deep-Sea Research Part I: Oceanographic Research Papers, 2016, 110, 1-19.	0.6	62
33	Formation of Fe-Mn crusts within a continental margin environment. Ore Geology Reviews, 2017, 87, 25-40.	1.1	62
34	Methanogenic calcite, 13C-depleted bivalve shells, and gas hydrate from a mud volcano offshore southern California. Geology, 2006, 34, 109.	2.0	58
35	Origin of authigenic carbonates in sediment from the deep Bering Sea. Sedimentology, 1979, 26, 681-705.	1.6	57
36	Marine Phosphorites as Potential Resources for Heavy Rare Earth Elements and Yttrium. Minerals (Basel, Switzerland), 2016, 6, 88.	0.8	57

#	Article	IF	Citations
37	Phosphorites, Coâ€rich Mn nodules, and Feâ€Mn crusts from Galicia Bank, NE Atlantic: Reflections of Cenozoic tectonics and paleoceanography. Geochemistry, Geophysics, Geosystems, 2016, 17, 346-374.	1.0	57
38	Fractionation of the geochemical twins Zrâ€“Hf and Nbâ€“Ta during scavenging from seawater by hydrogenetic ferromanganese crusts. Geochimica Et Cosmochimica Acta, 2014, 140, 468-487.	1.6	56
39	Deep-sea Fe-Mn Crusts from the Northeast Atlantic Ocean: Composition and Resource Considerations. Marine Georesources and Geotechnology, 2013, 31, 40-70.	1.2	54
40	Lithium contents and isotopic compositions of ferromanganese deposits from the global ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2007, 54, 1147-1162.	0.6	52
41	Hydrothermal mineralization along submarine rift zones, Hawaii. Marine Georesources and Geotechnology, 1996, 14, 177-203.	1.2	51
42	Tracing the history of submarine hydrothermal inputs and the significance of hydrothermal hafnium for the seawater budgetâ€”a combined Pbâ€“Hfâ€“Nd isotope approach. Earth and Planetary Science Letters, 2004, 222, 259-273.	1.8	50
43	Barite-forming environments along a rifted continental margin, Southern California Borderland. Deep-Sea Research Part II: Topical Studies in Oceanography, 2007, 54, 1327-1349.	0.6	49
44	Persistence of deeply sourced iron in the Pacific Ocean. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1292-1297.	3.3	49
45	Increasing rate of movement with time between California and the Pacific Plate: From Delgada Submarine Fan source areas. Journal of Geophysical Research, 1973, 78, 7752-7762.	3.3	47
46	Composition and origin of Early Cambrian Tiantaishan phosphoriteâ€“Mn carbonate ores, Shaanxi Province, China. Ore Geology Reviews, 1999, 15, 95-134.	1.1	44
47	Lead isotopes in North Pacific deep water â€“ implications for past changes in input sources and circulation patterns. Earth and Planetary Science Letters, 2003, 209, 149-164.	1.8	44
48	Meiji sediment tongue: North Pacific evidence for limited movement between the Pacific and North American plates. Bulletin of the Geological Society of America, 1977, 88, 1567.	1.6	43
49	Composition and characteristics of the ferromanganese crusts from the western Arctic Ocean. Ore Geology Reviews, 2017, 87, 88-99.	1.1	43
50	Formation and Occurrence of Ferromanganese Crusts: Earth's Storehouse for Critical Metals. Elements, 2018, 14, 313-318.	0.5	43
51	Composition and genesis of ferromanganese deposits from the northern South China Sea. Journal of Asian Earth Sciences, 2017, 138, 110-128.	1.0	41
52	Arctic Deep Water Ferromanganeseâ€Oxide Deposits Reflect the Unique Characteristics of the Arctic Ocean. Geochemistry, Geophysics, Geosystems, 2017, 18, 3771-3800.	1.0	41
53	Cobalt-Rich Ferromanganese Crusts in the Pacific. , 2017, , 239-279.		39
54	Sr and Nd isotopic variations in ferromanganese crusts from the Central Pacific: Implications for age and source provenance. Geochimica Et Cosmochimica Acta, 1988, 52, 2229-2233.	1.6	37

#	Article	IF	Citations
55	Genesis and Evolution of Ferromanganese Crusts from the Summit of Rio Grande Rise, Southwest Atlantic Ocean. Minerals (Basel, Switzerland), 2020, 10, 349.	0.8	37
56	Geochronology and subsurface stratigraphy of Pukapuka and Rakahanga atolls, Cook Islands: Late Quaternary reef growth and sea level history. Palaeogeography, Palaeoclimatology, Palaeoecology, 1992, 91, 377-394.	1.0	36
57	Influence of substrate rocks on Feâ€“Mn crust composition. Deep-Sea Research Part I: Oceanographic Research Papers, 1999, 46, 855-875.	0.6	36
58	Growth response of a deep-water ferromanganese crust to evolution of the Neogene Indian Ocean. Marine Geology, 2000, 162, 529-540.	0.9	36
59	Seawater osmium isotope evidence for a middle Miocene flood basalt event in ferromanganese crust records. Earth and Planetary Science Letters, 2008, 273, 175-183.	1.8	33
60	Platinum enrichment and phase associations in marine ferromanganese crusts and nodules based on a multi-method approach. Chemical Geology, 2020, 539, 119426.	1.4	31
61	Central Pacific Cobalt-Rich Ferromanganese Crusts: Historical Perspective and Regional Variability. Earth Science Series, 1992, , 261-283.	0.3	29
62	Metalliferous Sediment and a Silica-Hematite Deposit within the Blanco Fracture Zone, Northeast Pacific. Marine Georesources and Geotechnology, 2008, 26, 317-339.	1.2	29
63	New age for ferromanganese crust 109Dâ€€ and implications for isotopic records of lead, neodymium, hafnium, and thallium in the Pliocene Indian Ocean. Paleoceanography, 2011, 26, .	3.0	28
64	Mineral and chemostratigraphy of a Toarcian black shale hosting Mn-carbonate microbialites (ÃšrkÃªt,) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.0	27
65	Integration of bed characteristics, geochemical tracers, current measurements, and numerical modeling for assessing the provenance of beach sand in the San Francisco Bay Coastal System. Marine Geology, 2013, 345, 181-206.	0.9	24
66	Geochemical approach to the genesis of the Oligocene-stratiform manganese-oxide deposit, Chiatura (Georgia). Ore Geology Reviews, 2021, 128, 103910.	1.1	24
67	Chapter 10 Petrology and Geochemistry of Cretaceous and Paleogene Cherts From Western Costa Rica. Developments in Sedimentology, 1983, , 143-174.	0.5	23
68	Tectonic and paleoceanographic conditions during the formation of ferromanganese nodules from the northern South China Sea based on the high-resolution geochemistry, mineralogy and isotopes. Marine Geology, 2019, 410, 146-163.	0.9	22
69	Dolomitization of Quaternary reef limestone, Aitutaki, Cook Islands. Sedimentology, 1992, 39, 645-661.	1.6	21
70	Hydrothermal palygorskite and ferromanganese mineralization at a central California margin fracture zone. Marine Geology, 1993, 115, 47-65.	0.9	21
71	A Srâ€“Nd isotopic study of sand-sized sediment provenance and transport for the San Francisco Bay coastal system. Marine Geology, 2013, 345, 143-153.	0.9	19
72	Geochemistry and origins of carbonate fluorapatite in seamount Fe Mn crusts from the Pacific Ocean. Marine Geology, 2020, 423, 106135.	0.9	19

#	Article	IF	Citations
73	Clay mineralogy, fine-grained sediment dispersal, and inferred current patterns, lower Cook Inlet and Kodiak shelf, Alaska. Sedimentary Geology, 1979, 24, 291-306.	1.0	18
74	Chapter 3 Comparisons Between Open-Ocean and Continental Margin Chert Sequences. Developments in Sedimentology, 1983, 36, 25-43.	0.5	18
75	Mineralogy and stable isotopes of black shale-hosted manganese ores, southwestern Taurides, Turkey. Economic Geology, 1997, 92, 733-744.	1.8	18
76	Deep-sea Sediment Source Areas: Implications of Variable Rates of Movement between California and the Pacific Plate. Nature, 1973, 241, 40-41.	13.7	17
77	Integration of bed characteristics, geochemical tracers, current measurements, and numerical modeling for assessing the provenance of beach sand in the San Francisco Bay Coastal System. Marine Geology, 2013, 336, 120-145.	0.9	17
78	Multidisciplinary Scientific Cruise to the Rio Grande Rise. Frontiers in Marine Science, 2019, 6, .	1.2	17
79	Geographic and Oceanographic Influences on Ferromanganese Crust Composition Along a Pacific Ocean Meridional Transect, 14 N to 14S. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008716.	1.0	17
80	A framework for understanding Mo isotope records of Archean and Paleoproterozoic Fe- and Mn-rich sedimentary rocks: Insights from modern marine hydrothermal Fe-Mn oxides. Geochimica Et Cosmochimica Acta, 2020, 280, 221-236.	1.6	17
81	Mineralogy and Diagenesis of Surface Sediments from DOMES Areas A, B, and C. , 1979, , 365-396.		16
82	Clay-mineral suites, sources, and inferred dispersal routes: Southern California continental shelf. Marine Environmental Research, 2003, 56, 79-102.	1.1	16
83	Sand sources and transport pathways for the San Francisco Bay coastal system, based on X-ray diffraction mineralogy. Marine Geology, 2013, 345, 154-169.	0.9	16
84	The evolution of climatically driven weathering inputs into the western Arctic Ocean since the late Miocene: Radiogenic isotope evidence. Earth and Planetary Science Letters, 2015, 419, 111-124.	1.8	16
85	Ordovician reef-hosted Jiaodingshan Mnâ€“Co deposit and Dawashan Mn deposit, Sichuan Province, China. Ore Geology Reviews, 1999, 15, 135-151.	1.1	15
86	Sub-seafloor acoustic characterization of seamounts near the Ogasawara Fracture Zone in the western Pacific using chirp (3â€“7kHz) subbottom profiles. Deep-Sea Research Part I: Oceanographic Research Papers, 2005, 52, 1932-1956.	0.6	15
87	Early Pleistocene origin of reefs around Lanai, Hawaii. Earth and Planetary Science Letters, 2010, 290, 331-339.	1.8	15
88	Distance-gradient-based variogram and Kriging to evaluate cobalt-rich crust deposits on seamounts. Ore Geology Reviews, 2017, 84, 218-227.	1.1	15
89	Magnetite magnetofossils record biogeochemical remanent magnetization in hydrogenetic ferromanganese crusts. Geology, 2020, 48, 298-302.	2.0	15
90	Seabed mining and blue growth: exploring the potential of marine mineral deposits as a sustainable source of rare earth elements (MaREEs) (IUPAC Technical Report). Pure and Applied Chemistry, 2022, 94, 329-351.	0.9	14

#	Article	IF	Citations
91	Ferromanganese crusts as recorders of marine dissolved oxygen. Earth and Planetary Science Letters, 2020, 533, 116057.	1.8	13
92	A possible link between seamount sector collapse and manganese nodule occurrence in the abyssal plains, NW Pacific Ocean. Ore Geology Reviews, 2021, 138, 104378.	1.1	12
93	Geophysical investigation of seamounts near the Ogasawara Fracture Zone, western Pacific. Earth, Planets and Space, 2009, 61, 319-331.	0.9	10
94	A magnetic approach to unravelling the paleoenvironmental significance of nanometer-sized Fe hydroxide in NW Pacific ferromanganese deposits. Earth and Planetary Science Letters, 2021, 565, 116945.	1.8	10
95	Miocene Phosphatization of Rocks From the Summit of Rio Grande Rise, Southwest Atlantic Ocean. Paleoceanography and Paleoclimatology, 2021, 36, e2020PA004197.	1.3	10
96	Stable isotope, chemical, and mineral compositions of the Middle Proterozoic Lijiaying Mn deposit, Shaanxi Province, China. Ore Geology Reviews, 1999, 15, 55-69.	1.1	9
97	Crystal Chemistry of Thallium in Marine Ferromanganese Deposits. ACS Earth and Space Chemistry, 2022, 6, 1269-1285.	1.2	9
98	Fe-Mn oxide indications in the feeder and mound zone of the Jurassic Mn-carbonate ore deposit, ÃšrkÃºt, Hungary. Ore Geology Reviews, 2017, 86, 839-855.	1.1	8
99	Spectroscopic Insights Into Ferromanganese Crust Formation and Diagenesis. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC009074.	1.0	8
100	Effects of Phosphatization on the Mineral Associations and Speciation of Pb in Ferromanganese Crusts. ACS Earth and Space Chemistry, 2020, 4, 1515-1526.	1.2	8
101	Gallium-aluminum systematics of marine hydrogenetic ferromanganese crusts: Inter-oceanic differences and fractionation during scavenging. Geochimica Et Cosmochimica Acta, 2021, 310, 187-204.	1.6	8
102	Lithified carbonate sediment and zeolitic tuff in basalts, Mid-Atlantic Ridge. Sedimentology, 1973, 20, 399-410.	1.6	7
103	A porous silica rock (â€œtripoliâ€) in the footwall of the Jurassic ÃšrkÃºt manganese deposit, Hungary: Composition, and origin through carbonate dissolution. Sedimentary Geology, 2005, 177, 87-96.	1.0	7
104	Progressive ocean oxygenation atÂ~2.2ÂGa inferred from geochemistry and molybdenum isotopes of the Nsuta Mn deposit, Ghana. Chemical Geology, 2021, 567, 120116.	1.4	6
105	Growth of ferromanganese crusts on bioturbated soft substrate, Tropic Seamount, northeast Atlantic ocean. Deep-Sea Research Part I: Oceanographic Research Papers, 2021, 175, 103586.	0.6	6
106	DIAGENETIC EVOLUTION OF SEAMOUNT PHOSPHORITE. , 2000, , 245-256.		6
107	Geochemical insights into formation of enigmatic ironstones from Rio Grande rise, South Atlantic Ocean. Marine Geology, 2022, 444, 106716.	0.9	5
108	Estimates of Metals Contained in Abyssal Manganese Nodules and Ferromanganese Crusts in the Global Ocean Based on Regional Variations and Genetic Types of Nodules. , 2022, , 53-80.		5

#	Article	IF	Citations
109	Geology and Hydrogeology of the Cook Islands. Developments in Sedimentology, 2004, 54, 503-535.	0.5	4
110	Mineralization at Oceanic Transform Faults and Fracture Zones. , 2019, , 105-118.		4
111	Evolution of a deep-water ferromanganese nodule in the South China Sea in response to Pacific deep-water circulation and continental weathering during the Plio-Pleistocene. Quaternary Science Reviews, 2020, 229, 106106.	1.4	4
112	Geochemical and mineralogical composition of ferromanganese precipitates from the southern Mariana arc: Evaluation, formation, and implications. Chemical Geology, 2021, 568, 120132.	1.4	4
113	Ferromanganese Crusts and Nodules: Rocks That Grow. Encyclopedia of Earth Sciences Series, 2018, , 477-483.	0.1	3
114	Diagenesis of diatomite from the Kolubara Coal Basin, BaroÅ¡evac, Serbia. Geological Journal, 1994, 29, 209-217.	0.6	2
115	Changes in sediment source areas to the Amerasia Basin, Arctic Ocean, over the past 5.5 million years based on radiogenic isotopes (Sr, Nd, Pb) of detritus from ferromanganese crusts. Marine Geology, 2020, 428, 106280.	0.9	2
116	Co-Rich Manganese Crusts. , 2014, , 1-7.		2
117	Ocean Floor Manganese Deposits. , 2021, , 993-1001.		1
118	Ferromanganese Crusts and Nodules, Rocks that Grow. Encyclopedia of Earth Sciences Series, 2016, , 1-7.	0.1	1
119	Siliceous Deposits of the Tethys and Pacific Regions. , 1989, , 1-17.		0
120	Cobalt-rich Manganese Crusts. Encyclopedia of Earth Sciences Series, 2016, , 113-117.	0.1	0