

Henry J B Dick

List of Publications by Year in descending order

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86
papers

12,127
citations

50276

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docs citations

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times ranked

4160
citing authors

#	ARTICLE	IF	CITATIONS
1	Chromian spinel as a petrogenetic indicator in abyssal and alpine-type peridotites and spatially associated lavas. Contributions To Mineralogy and Petrology, 1984, 86, 54-76.	3.1	1,727
2	Melting in the oceanic upper mantle: An ion microprobe study of diopsides in abyssal peridotites. Journal of Geophysical Research, 1990, 95, 2661-2678.	3.3	1,091
3	An ultraslow-spreading class of ocean ridge. Nature, 2003, 426, 405-412.	27.8	852
4	Formation of harzburgite by pervasive melt/rock reaction in the upper mantle. Nature, 1992, 358, 635-641.	27.8	597
5	Coupled major and trace elements as indicators of the extent of melting in mid-ocean-ridge peridotites. Nature, 2001, 410, 677-681.	27.8	528
6	A long in situ section of the lower ocean crust: results of ODP Leg 176 drilling at the Southwest Indian Ridge. Earth and Planetary Science Letters, 2000, 179, 31-51.	4.4	456
7	Mineralogic variability of the uppermost mantle along mid-ocean ridges. Earth and Planetary Science Letters, 1984, 69, 88-106.	4.4	424
8	Magmatic and amagmatic seafloor generation at the ultraslow-spreading Gakkel ridge, Arctic Ocean. Nature, 2003, 423, 956-961.	27.8	366
9	Abyssal peridotites, very slow spreading ridges and ocean ridge magmatism. Geological Society Special Publication, 1989, 42, 71-105.	1.3	350
10	Pervasive magnesium loss by marine weathering of peridotite. Geochimica Et Cosmochimica Acta, 1995, 59, 4219-4235.	3.9	311
11	Open system melting and temporal and spatial variation of peridotite and basalt at the Atlantis II Fracture Zone. Journal of Geophysical Research, 1992, 97, 9219-9241.	3.3	297
12	Tectonics of ridge-transform intersections at the Kane fracture zone. Marine Geophysical Researches, 1983, 6, 51-98.	1.2	277
13	The fingerprint of seawater circulation in a 500-meter section of ocean crust gabbros. Geochimica Et Cosmochimica Acta, 1999, 63, 4059-4080.	3.9	255
14	A mechanism for magmatic accretion under spreading centres. Nature, 1984, 312, 146-148.	27.8	253
15	Plutonic foundation of a slow-spreading ridge segment: Oceanic core complex at Kane Megamullion, 23°30'N, 45°20'W. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	207
16	Discovery of abundant hydrothermal venting on the ultraslow-spreading Gakkel ridge in the Arctic Ocean. Nature, 2003, 421, 252-256.	27.8	206
17	Pervasive melt percolation reactions in ultra-depleted refractory harzburgites at the Mid-Atlantic Ridge, 15° 20'N: ODP Hole 1274A. Contributions To Mineralogy and Petrology, 2007, 153, 303-319.	3.1	201
18	Mineralogy of the mid-ocean-ridge basalt source from neodymium isotopic composition of abyssal peridotites. Nature, 2002, 418, 68-72.	27.8	186

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19	Focused melt flow and localized deformation in the upper mantle: Juxtaposition of replacive dunite and ductile shear zones in the Josephine peridotite, SW Oregon. <i>Journal of Geophysical Research</i> , 1995, 100, 423-438.	3.3	185
20	Melt-rock reaction in the lower oceanic crust and its implications for the genesis of mid-ocean ridge basalt. <i>Earth and Planetary Science Letters</i> , 2008, 271, 311-325.	4.4	160
21	The geochemical consequences of late-stage low-grade alteration of lower ocean crust at the SW Indian Ridge: results from ODP Hole 735B (Leg 176). <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 3267-3287.	3.9	159
22	Evidence from gravity anomalies for interactions of the Marion and Bouvet hotspots with the Southwest Indian Ridge: effects of transform offsets. <i>Earth and Planetary Science Letters</i> , 2001, 187, 283-300.	4.4	135
23	Thin crust as evidence for depleted mantle supporting the Marion Rise. <i>Nature</i> , 2013, 494, 195-200.	27.8	135
24	Mantle Melting, Melt Transport, and Delivery Beneath a Slow-Spreading Ridge: The Paleo-MAR from 23°15'N to 23°45'N. <i>Journal of Petrology</i> , 2010, 51, 425-467.	2.8	133
25	Formation of the lower ocean crust and the crystallization of gabbroic cumulates at a very slowly spreading ridge. <i>Journal of Volcanology and Geothermal Research</i> , 2001, 110, 191-233.	2.1	131
26	Petrology and Geochemistry of MORB from 25° to 46° along the Southwest Indian Ridge: Evidence for Contrasting Styles of Mantle Enrichment. <i>Journal of Petrology</i> , 1989, 30, 947-986.	2.8	117
27	MORB generation beneath the ultraslow spreading Southwest Indian Ridge (9°-25°E): Major element chemistry and the importance of process versus source. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	2.5	113
28	An assessment of upper mantle heterogeneity based on abyssal peridotite isotopic compositions. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	113
29	Discovery of ancient and active hydrothermal systems along the ultra-slow spreading Southwest Indian Ridge 10°-16°E. <i>Geochemistry, Geophysics, Geosystems</i> , 2002, 3, 1-14.	2.5	110
30	Nd and Sr isotope evidence linking mid-ocean-ridge basalts and abyssal peridotites. <i>Nature</i> , 1994, 371, 57-60.	27.8	109
31	Cumulate gabbros from the Southwest Indian Ridge, 54°1/2S-7°1/2 16° E: implications for magmatic processes at a slow spreading ridge. <i>Contributions To Mineralogy and Petrology</i> , 1989, 103, 44-63.	3.1	106
32	Compositional Layering in Alpine Peridotites: Evidence for Pressure Solution Creep in the Mantle. <i>Journal of Geology</i> , 1979, 87, 403-416.	1.4	93
33	Hydrothermal venting in magma deserts: The ultraslow-spreading Gakkel and Southwest Indian Ridges. <i>Geochemistry, Geophysics, Geosystems</i> , 2004, 5, .	2.5	93
34	Abyssal peridotite osmium isotopic compositions from cr-spinel. <i>Geochemistry, Geophysics, Geosystems</i> , 2002, 3, 1-24.	2.5	92
35	Dating the Growth of Oceanic Crust at a Slow-Spreading Ridge. <i>Science</i> , 2005, 310, 654-657.	12.6	90
36	A Model for the Development of Thin Overthrust Sheets of Crystalline Rock. <i>Geology</i> , 1974, 2, 35.	4.4	78

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37	Petrogenesis of anomalous K-enriched MORB from the Southwest Indian Ridge: 11°53'E to 14°38'E. Contributions To Mineralogy and Petrology, 1992, 110, 253-268.	3.1	71
38	Pyroxenites from the Southwest Indian Ridge, 9-16°E: Cumulates from Incremental Melt Fractions Produced at the Top of a Cold Melting Regime. Journal of Petrology, 2007, 48, 647-660.	2.8	68
39	Mechanism for generating the anomalous uplift of oceanic core complexes: Atlantis Bank, southwest Indian Ridge. Geology, 2003, 31, 1105.	4.4	61
40	Melt-Rock Reaction in the Mantle: Mantle Troctolites from the Parece Vela Ancient Back-Arc Spreading Center. Journal of Petrology, 2013, 54, 861-885.	2.8	60
41	Recycling and metabolic flexibility dictate life in the lower oceanic crust. Nature, 2020, 579, 250-255.	27.8	59
42	Mylonitic deformation at the Kane oceanic core complex: Implications for the rheological behavior of oceanic detachment faults. Geochemistry, Geophysics, Geosystems, 2013, 14, 3085-3108.	2.5	56
43	Dynamic Accretion Beneath a Slow-Spreading Ridge Segment: IODP Hole 1473A and the Atlantis Bank Oceanic Core Complex. Journal of Geophysical Research: Solid Earth, 2019, 124, 12631-12659.	3.4	53
44	The Atlantis Bank Gabbro Massif, Southwest Indian Ridge. Progress in Earth and Planetary Science, 2019, 6, .	3.0	50
45	Isotope and trace element insights into heterogeneity of subridge mantle. Geochemistry, Geophysics, Geosystems, 2014, 15, 2438-2453.	2.5	49
46	Nonvolcanic seafloor spreading and corner-flow rotation accommodated by extensional faulting at 15°N on the Mid-Atlantic Ridge: A structural synthesis of ODP Leg 209. Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	2.5	47
47	Magnesium isotopic composition of the oceanic mantle and oceanic Mg cycling. Geochimica Et Cosmochimica Acta, 2017, 206, 151-165.	3.9	47
48	Paired melt lenses at the East Pacific Rise and the pattern of melt flow through the gabbroic layer at a fast-spreading ridge. Lithos, 2009, 112, 73-86.	1.4	46
49	Evolution of the Southwest Indian Ridge from 55°45'E to 62°E: Changes in plate-boundary geometry since 26 Ma. Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	2.5	44
50	Tracking flux melting and melt percolation in supra-subduction peridotites (Josephine ophiolite, USA). Contributions To Mineralogy and Petrology, 2014, 168, 1.	3.1	42
51	Petrology of local concentration of chromian spinel in dunite from the slow-spreading Southwest Indian Ridge. European Journal of Mineralogy, 2007, 19, 871-882.	1.3	39
52	Occurrence of Felsic Rocks in Oceanic Gabbros from IODP Hole U1473A: Implications for Evolved Melt Migration in the Lower Oceanic Crust. Minerals (Basel, Switzerland), 2018, 8, 583.	2.0	39
53	Recycled arc mantle recovered from the Mid-Atlantic Ridge. Nature Communications, 2020, 11, 3887.	12.8	34
54	The oxidation state of the Earth's sub-oceanic mantle from oxygen thermobarometry of abyssal spinel peridotites. Nature, 1989, 341, 526-527.	27.8	32

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55	Development and evolution of detachment faulting along 50 km of the Mid-Atlantic Ridge near 16.5°N. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 4692-4711.	2.5	32
56	Archean cratonic mantle recycled at a mid-ocean ridge. <i>Science Advances</i> , 2022, 8, .	10.3	30
57	Nonvolcanic tectonic islands in ancient and modern oceans. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 4698-4717.	2.5	28
58	Ocean rises are products of variable mantle composition, temperature and focused melting. <i>Nature Geoscience</i> , 2015, 8, 68-74.	12.9	28
59	An Early Cretaceous subduction-modified mantle underneath the ultraslow spreading Gakkel Ridge, Arctic Ocean. <i>Science Advances</i> , 2020, 6, .	10.3	27
60	Melt extraction and mantle source at a Southwest Indian Ridge Dragon Bone amagmatic segment on the Marion Rise. <i>Lithos</i> , 2016, 246-247, 48-60.	1.4	24
61	Plate-driven micro-hotspots and the evolution of the Dragon Flag melting anomaly, Southwest Indian Ridge. <i>Earth and Planetary Science Letters</i> , 2020, 531, 116002.	4.4	23
62	New insights on the origin of troctolites from the breakaway area of the Godzilla Megamullion (Parece Vela back-arc basin): The role of melt-mantle interaction on the composition of the lower crust. <i>Island Arc</i> , 2016, 25, 220-234.	1.1	22
63	Sulfide enrichment at an oceanic crust-mantle transition zone: Kane Megamullion (23°N, MAR). <i>Geochimica Et Cosmochimica Acta</i> , 2018, 230, 155-189.	3.9	20
64	Noble gas signatures of abyssal gabbros and peridotites at an Indian Ocean core complex. <i>Geochemistry, Geophysics, Geosystems</i> , 2003, 4, .	2.5	19
65	Magmatic srilankite (Ti ₂ ZrO ₆) in gabbroic vein cutting oceanic peridotites: An unusual product of peridotite-melt interactions beneath slow-spreading ridges. <i>American Mineralogist</i> , 2004, 89, 759-766.	1.9	19
66	Emplacement and High-Temperature Evolution of Gabbros of the 16.5°N Oceanic Core Complexes (Mid-Atlantic Ridge): Insights Into the Compositional Variability of the Lower Oceanic Crust. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 46-66.	2.5	19
67	Evidence for Multi-stage Melt Transport in the Lower Ocean Crust: the Atlantis Bank Gabbroic Massif (IODP Hole U1473A, SW Indian Ridge). <i>Journal of Petrology</i> , 2021, 61, .	2.8	19
68	MORB Melt Transport through Atlantis Bank Oceanic Batholith (SW Indian Ridge). <i>Journal of Petrology</i> , 2021, 62, .	2.8	18
69	The Plutonic Foundation of a Slow-Spreading Ridge. <i>Geophysical Monograph Series</i> , 0, , 1-39.	0.1	16
70	Podiform chromitite formation in a low-Cr/high-Al system: An example from the Southwest Indian Ridge (SWIR). <i>Mineralogy and Petrology</i> , 2014, 108, 533-549.	1.1	16
71	Tectonic Controls on Block Rotation and Sheeted Sill Emplacement in the Xigaze Ophiolite (Tibet): The Construction Mode of Slow-Spreading and Ultraslow-Spreading Oceanic Crusts. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009297.	2.5	15
72	The Xigaze ophiolite: fossil ultraslow-spreading ocean lithosphere in the Tibetan Plateau. <i>Journal of the Geological Society</i> , 2021, 178, .	2.1	15

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73	The earliest mantle fabrics formed during subduction zone infancy. <i>Earth and Planetary Science Letters</i> , 2013, 377-378, 106-113.	4.4	13
74	Mantle rock exposures at oceanic core complexes along mid-ocean ridges. <i>Geologos</i> , 2015, 21, 207-231.	0.6	13
75	Thin crust and exposed mantle control sulfide differentiation in slow-spreading ridge magmas. <i>Geology</i> , 2017, 45, 935-938.	4.4	13
76	Cemented mounds and hydrothermal sediments on the detachment surface at Kane Megamullion: A new manifestation of hydrothermal venting. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 3352-3378.	2.5	11
77	Competing effects of spreading rate, crystal fractionation and source variability on Fe isotope systematics in mid-ocean ridge lavas. <i>Scientific Reports</i> , 2021, 11, 4123.	3.3	11
78	Influence of igneous processes and serpentinization on geochemistry of the Logatchev Massif harzburgites (14°45'N, Mid-Atlantic Ridge), and comparison with global abyssal peridotites. <i>International Geology Review</i> , 2013, 55, 115-130.	2.1	7
79	Trace Element and Isotopic Evidence for Recycled Lithosphere from Basalts from 48 to 53°E, Southwest Indian Ridge. <i>Journal of Petrology</i> , 2021, 61, .	2.8	7
80	High-Temperature Strain Localization and the Nucleation of Oceanic Core Complexes (16.5°N), Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.4	6
81	Sulfide enrichment along igneous layer boundaries in the lower oceanic crust: IODP Hole U1473A, Atlantis Bank, Southwest Indian Ridge. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 320, 179-206.	3.9	6
82	Heterogeneity in texture and crystal fabric of intensely hydrated ultramylonitic peridotites along a transform fault, Southwest Indian Ridge. <i>Tectonophysics</i> , 2022, 823, 229206.	2.2	5
83	Magmatism and Crust-mantle Boundary on the Ultra-slow Spreading Ridge as Observed in Atlantis Bank, Southwest Indian Ridge. <i>Journal of Geography (Chigaku Zasshi)</i> , 2003, 112, 705-719.	0.3	4
84	Silica-Rich Vein Formation in an Evolving Stress Field, Atlantis Bank Oceanic Core Complex. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008795.	2.5	4
85	Enormous Lithium Isotopic Variations of Abyssal Peridotites Reveal Fast Cooling and Melt/Fluid-Rock Interactions. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB020393.	3.4	3
86	Dick receives 2011 Harry H. Hess Medal: Response. <i>Eos</i> , 2012, 93, 23-23.	0.1	0