Greg Hirth

List of Publications by Year
in descending order

22 papers	4,222 citations	516710 16 h-index	752698 20 g-index
22 all docs	22 docs citations	22 times ranked	2708 citing authors

#	Article	IF	Citations
1	Water in the oceanic upper mantle: implications for rheology, melt extraction and the evolution of the lithosphere. Earth and Planetary Science Letters, 1996, 144, 93-108.	4.4	1,423
2	Rheology of the upper mantle and the mantle wedge: A view from the experimentalists. Geophysical Monograph Series, 2003, , 83-105.	0.1	780
3	An evaluation of quartzite flow laws based on comparisons between experimentally and naturally deformed rocks. International Journal of Earth Sciences, 2001, 90, 77-87.	1.8	465
4	Grain size sensitive deformation mechanisms in naturally deformed peridotites. Earth and Planetary Science Letters, 2006, 248, 438-450.	4.4	299
5	Experimental constraints on the dynamics of the partially molten upper mantle: 2. Deformation in the dislocation creep regime. Journal of Geophysical Research, 1995, 100, 15441-15449.	3.3	281
6	Rheologic controls on slab dynamics. Geochemistry, Geophysics, Geosystems, 2007, 8, .	2.5	166
7	Comparison of continental and oceanic mantle electrical conductivity: Is the Archean lithosphere dry?. Geochemistry, Geophysics, Geosystems, 2000, 1, n/a-n/a.	2.5	124
8	Arc-parallel flow within the mantle wedge: Evidence from the accreted Talkeetna arc, south central Alaska. Journal of Geophysical Research, 2003, 108, .	3.3	122
9	Implications of grain size evolution on the seismic structure of the oceanic upper mantle. Earth and Planetary Science Letters, 2009, 282, 178-189.	4.4	118
10	Using shortâ€term postseismic displacements to infer the ambient deformation conditions of the upper mantle. Journal of Geophysical Research, 2012, 117, .	3.3	86
11	Variation of cooling rate with depth in lower crust formed at an oceanic spreading ridge: Plagioclase crystal size distributions in gabbros from the Oman ophiolite. Geochemistry, Geophysics, Geosystems, 2001, 2, n/a-n/a.	2.5	73
12	The Rheology of the Lower Oceanic Crust: Implications for Lithospheric Deformation at Mid-Ocean Ridges. Geophysical Monograph Series, 0, , 291-303.	0.1	56
13	The influence of stress history on the grain size and microstructure of experimentally deformed quartzite. Journal of Structural Geology, 2016, 83, 194-206.	2.3	46
14	Role of pore fluid pressure on transient strength changes and fabric development during serpentine dehydration at mantle conditions: Implications for subduction-zone seismicity. Earth and Planetary Science Letters, 2015, 421, 1-12.	4.4	44
15	Newtonian versus non-Newtonian upper mantle viscosity: Implications for subduction initiation. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	37
16	Melt extraction from partially molten peridotites. Geochemistry, Geophysics, Geosystems, 2003, 4, n/a-n/a.	2.5	33
17	Grain growth and inclusion formation in partially molten carbonate rocks. Contributions To Mineralogy and Petrology, 2002, 142, 501-514.	3.1	22
18	Rates of Olivine Grain Growth During Dynamic Recrystallization and Postdeformation Annealing. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020415.	3.4	16

#	Article	IF	Citations
19	Experimental Constraints on Thermal Cracking of Peridotite at Oceanic Spreading Centers. Geophysical Monograph Series, 2013, , 167-185.	0.1	15
20	Assessment of Quartz Grain Growth and the Application of the Wattmeter to Predict Quartz Recrystallized Grain Sizes. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021475.	3.4	9
21	Microstructural Shift due to Postâ€Ðeformation Annealing in the Upper Mantle. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009377.	2.5	7
22	Correction to â€œNewtonian versus non-Newtonian upper mantle viscosity: Implications for subduction initiationâ€• Geophysical Research Letters, 2005, 32, .	4.0	0