

William D Carlson

List of Publications by Year in descending order

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69
papers

6,022
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116194

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70
times ranked

4883
citing authors

#	ARTICLE	IF	CITATIONS
1	Multicomponent diffusion in aluminosilicate garnet: coupling effects due to charge compensation. <i>International Geology Review</i> , 2017, 59, 526-540.	1.1	6
2	Correlation factors for impurity diffusion on the sublattice of dodecahedral sites in garnet. <i>Physics and Chemistry of Minerals</i> , 2016, 43, 363-369.	0.3	1
3	Evaluation of a combined HRXCT/EBSD method for detecting epitaxial nucleation of garnet porphyroblasts. <i>European Journal of Mineralogy</i> , 2015, 27, 19-29.	0.4	3
4	Epitaxial nucleation of garnet on biotite in the polymetamorphic metapelites surrounding the Vedrette di Ries intrusion (Italian Eastern Alps). <i>European Journal of Mineralogy</i> , 2015, 27, 5-18.	0.4	6
5	Controls on metamorphic equilibration: the importance of intergranular solubilities mediated by fluid composition. <i>Journal of Metamorphic Geology</i> , 2015, 33, 123-146.	1.6	24
6	Beyond the equilibrium paradigm: How consideration of kinetics enhances metamorphic interpretation. <i>American Mineralogist</i> , 2015, 100, 1659-1667.	0.9	63
7	Incorporation of Y and REEs in aluminosilicate garnet: Energetics from atomistic simulation. <i>American Mineralogist</i> , 2014, 99, 1022-1034.	0.9	30
8	Ti resetting in quartz during dynamic recrystallization: Mechanisms and significance. <i>American Mineralogist</i> , 2014, 99, 2025-2030.	0.9	28
9	Rates of Li diffusion in garnet: Coupled transport of Li and Y+REEs. <i>American Mineralogist</i> , 2014, 99, 1676-1682.	0.9	22
10	Crystallization kinetics during regional metamorphism of porphyroblastic rocks. <i>Journal of Metamorphic Geology</i> , 2013, 31, 963-979.	1.6	24
11	Metamorphism as Garnet Sees It: The Kinetics of Nucleation and Growth, Equilibration, and Diffusional Relaxation. <i>Elements</i> , 2013, 9, 439-445.	0.5	66
12	Magnitudes of departures from equilibrium during regional metamorphism of porphyroblastic rocks. <i>Journal of Metamorphic Geology</i> , 2013, 31, 981-1002.	1.6	27
13	Strain rates at high temporal resolution from curved inclusion trails in garnet, Passo del Sole, Central Swiss Alps. <i>Journal of Metamorphic Geology</i> , 2013, 31, 243-262.	1.6	13
14	Origins of yttrium and rare earth element distributions in metamorphic garnet. <i>Journal of Metamorphic Geology</i> , 2013, 31, 663-689.	1.6	81
15	Numerical simulation of diffusion-controlled nucleation and growth of porphyroblasts. <i>Journal of Metamorphic Geology</i> , 2012, 30, 489-512.	1.6	25
16	Rates and mechanism of Y, REE, and Cr diffusion in garnet. <i>American Mineralogist</i> , 2012, 97, 1598-1618.	0.9	144
17	Porphyroblast crystallization: linking processes, kinetics, and microstructures. <i>International Geology Review</i> , 2011, 53, 406-445.	1.1	47
18	Implications of garnet resorption for the Lu-Hf garnet geochronometer: an example from the contact aureole of the Makhavinekh Lake Pluton, Labrador. <i>Journal of Metamorphic Geology</i> , 2011, 29, 901-916.	1.6	80

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19	Laser Raman microspectrometry of metamorphic quartz: A simple method for comparison of metamorphic pressures--Corrigendum. <i>American Mineralogist</i> , 2009, 94, 1291-1292.	0.9	3
20	Metasomatic origin of diamonds in the world's largest diamondiferous eclogite. <i>Lithos</i> , 2009, 112, 1014-1024.	0.6	45
21	Microstructural, chemical and textural records during growth of snowball garnet. <i>Journal of Metamorphic Geology</i> , 2009, 27, 423-437.	1.6	27
22	Mesoproterozoic plate tectonics: A collisional model for the Grenville-aged orogenic belt in the Llano uplift, central Texas. <i>Geology</i> , 2008, 36, 55.	2.0	60
23	High-Pressure Metamorphism in the Texas Grenville Orogen: Mesoproterozoic Subduction of the Southern Laurentian Continental Margin. <i>International Geology Review</i> , 2007, 49, 99-119.	1.1	22
24	Origin and mechanical significance of honeycomb garnet in high-pressure metasedimentary rocks from the Tauern Window, Eastern Alps. <i>Journal of Metamorphic Geology</i> , 2007, 25, 565-583.	1.6	29
25	Statistical analysis of bubble and crystal size distributions: Application to Colorado Plateau basalts. <i>Journal of Volcanology and Geothermal Research</i> , 2007, 164, 112-126.	0.8	30
26	Rates of Fe, Mg, Mn, and Ca diffusion in garnet. <i>American Mineralogist</i> , 2006, 91, 1-11.	0.9	204
27	Extent of chondrule melting: Evaluation of experimental textures, nominal grain size, and convolution index. <i>Meteoritics and Planetary Science</i> , 2006, 41, 1059-1071.	0.7	10
28	Three-dimensional imaging of earth and planetary materials. <i>Earth and Planetary Science Letters</i> , 2006, 249, 133-147.	1.8	90
29	Graves Nunataks 95209: A snapshot of metal segregation and core formation. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 516-531.	1.6	43
30	Variations in rates of nucleation and growth of biotite porphyroblasts. <i>Journal of Metamorphic Geology</i> , 2006, 24, 763-777.	1.6	10
31	Contrasting response of monazite and zircon to a high-T thermal overprint. <i>Lithos</i> , 2006, 88, 135-149.	0.6	40
32	Monazite and xenotime petrogenesis in the contact aureole of the Makhavinekh Lake Pluton, northern Labrador. <i>Contributions To Mineralogy and Petrology</i> , 2005, 148, 524-541.	1.2	35
33	Improved methods for quantitative analysis of three-dimensional porphyroblastic textures. , 2005, 1, 42.		31
34	DIFFUSION-CONTROLLED SYNKINEMATIC GROWTH OF GARNET FROM A HETEROGENEOUS PRECURSOR AT PASSO DEL SOLE, SWITZERLAND. <i>Canadian Mineralogist</i> , 2005, 43, 157-182.	0.3	30
35	Intracrystalline redistribution of Pb in zircon during high-temperature contact metamorphism. <i>Chemical Geology</i> , 2005, 217, 1-28.	1.4	34
36	Effects of matrix grain size on the kinetics of intergranular diffusion. <i>Journal of Metamorphic Geology</i> , 2004, 22, 733-742.	1.6	34

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37	Nature of diamonds in Yakutian eclogites: views from eclogite tomography and mineral inclusions in diamonds. <i>Lithos</i> , 2004, 77, 333-348.	0.6	67
38	Prograde, peak, and retrograde P-T paths from aluminium in orthopyroxene: High-temperature contact metamorphism in the aureole of the Makhavinekh Lake Pluton, Nain Plutonic Suite, Labrador. <i>Journal of Metamorphic Geology</i> , 2003, 21, 405-423.	1.6	44
39	An overgrowth model to explain multiple, dispersed high-Mn regions in the cores of garnet porphyroblasts. <i>American Mineralogist</i> , 2003, 88, 131-141.	0.9	71
40	Analysis of Vesicular Basalts and Lava Emplacement Processes for Application as a Paleobarometer/Paleoaltimeter. <i>Journal of Geology</i> , 2002, 110, 671-685.	0.7	67
41	Timing of Colorado Plateau uplift: Initial constraints from vesicular basalt-derived paleoelevations. <i>Geology</i> , 2002, 30, 807.	2.0	88
42	Scales of disequilibrium and rates of equilibration during metamorphism. <i>American Mineralogist</i> , 2002, 87, 185-204.	0.9	219
43	The Portales Valley meteorite breccia: evidence for impact-induced melting and metamorphism of an ordinary chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 323-342.	1.6	93
44	Acquisition, optimization and interpretation of X-ray computed tomographic imagery: applications to the geosciences. <i>Computers and Geosciences</i> , 2001, 27, 381-400.	2.0	1,172
45	Diamonds and Their Mineral Inclusions, and What They Tell Us: A Detailed "Pull-Apart" of a Diamondiferous Eclogite. <i>International Geology Review</i> , 2000, 42, 959-983.	1.1	82
46	Nondestructive evaluation of cavitation in an Al-Mg material deformed under creep conditions. <i>Journal of Materials Research</i> , 2000, 15, 76-84.	1.2	7
47	Trace element zoning as a record of chemical disequilibrium during garnet growth. <i>Geology</i> , 1999, 27, 555.	2.0	123
48	Sizes and Masses of Chondrules and Metal-Troilite Grains in Ordinary Chondrites: Possible Implications for Nebular Sorting. <i>Icarus</i> , 1999, 141, 96-106.	1.1	69
49	Late thermal evolution of Proterozoic rocks in the northeastern Llano Uplift, central Texas. <i>Precambrian Research</i> , 1999, 94, 49-72.	1.2	21
50	Variability of apatite fission-track annealing kinetics; II, Crystallographic orientation effects. <i>American Mineralogist</i> , 1999, 84, 1224-1234.	0.9	355
51	Variability of apatite fission-track annealing kinetics; III, Extrapolation to geological time scales. <i>American Mineralogist</i> , 1999, 84, 1235-1255.	0.9	656
52	Plagioclase-chain networks in slowly cooled basaltic magma. <i>American Mineralogist</i> , 1999, 84, 1819-1829.	0.9	139
53	Topology of syntectonic melt-flow networks in the deep crust; inferences from three-dimensional images of leucosome geometry in migmatites. <i>American Mineralogist</i> , 1999, 84, 1793-1818.	0.9	89
54	Petrologic Constraints on the Tectonic Evolution of the Llano Uplift. <i>Proceedings of the International Conferences on Basement Tectonics</i> , 1998, , 3-27.	0.1	8

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55	Three-dimensional quantitative textural analysis of metamorphic rocks using high-resolution computed X-ray tomography: Part II. Application to natural samples. <i>Journal of Metamorphic Geology</i> , 1997, 15, 45-57.	1.6	133
56	Disequilibrium for Ca during growth of pelitic garnet. <i>Journal of Metamorphic Geology</i> , 1997, 15, 421-438.	1.6	150
57	Controls on the nucleation and growth of porphyroblasts: Kinetics from natural textures and numerical models. <i>Geological Journal</i> , 1995, 30, 207-225.	0.6	102
58	Mechanisms of Porphyroblast Crystallization: Results from High-Resolution Computed X-ray Tomography. <i>Science</i> , 1992, 257, 1236-1239.	6.0	120
59	Competitive diffusion-controlled growth of porphyroblasts. <i>Mineralogical Magazine</i> , 1991, 55, 317-330.	0.6	76
60	The origin of olivine-plagioclase coronas in metagabbros from the Adirondack Mountains, New York. <i>Journal of Metamorphic Geology</i> , 1990, 8, 697-717.	1.6	100
61	The significance of intergranular diffusion to the mechanisms and kinetics of porphyroblast crystallization. <i>Contributions To Mineralogy and Petrology</i> , 1989, 103, 1-24.	1.2	194
62	Grenville-age orogeny in the Llano Uplift of central Texas: Deformation and metamorphism of the Rough Ridge Formation. <i>Bulletin of the Geological Society of America</i> , 1989, 101, 876-883.	1.6	11
63	High-pressure metamorphism during the Llano orogeny inferred from Proterozoic eclogite remnants. <i>Geology</i> , 1988, 16, 391.	2.0	28
64	Vanadium pentoxide as a high-temperature solvent for phase equilibrium studies in CaO-MgO-Al ₂ O ₃ -SiO ₂ . <i>Contributions To Mineralogy and Petrology</i> , 1986, 92, 89-92.	1.2	3
65	Fluid evolution and transport during metamorphism: evidence from the Llano Uplift, Texas. <i>Contributions To Mineralogy and Petrology</i> , 1986, 92, 518-529.	1.2	59
66	Reversed pyroxene phase equilibria in CaO-MgO-SiO ₂ from 925½ to 1,175½ C at one atmosphere pressure. <i>Contributions To Mineralogy and Petrology</i> , 1986, 92, 218-224.	1.2	17
67	Evidence against the stability of orthoenstatite above ¼1005Â°C at atmospheric pressure in CaO-MgO-SiO ₂ . <i>Geophysical Research Letters</i> , 1985, 12, 409-411.	1.5	13
68	Aragonite-Calcite Nucleation Kinetics: An Application and Extension of Avrami Transformation Theory. <i>Journal of Geology</i> , 1983, 91, 57-71.	0.7	30
69	Optical Determination of Topotactic Aragonite-Calcite Growth Kinetics: Metamorphic Implications. <i>Journal of Geology</i> , 1981, 89, 615-638.	0.7	145