Simon L Harley

List of Publications by Year
in descending order

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94 papers	7,805 citations	47 h-index	88 g-index
		47006	48315
98 all docs	98 docs citations	98 times ranked	2971 citing authors

#	Article	IF	Citations
1	An experimental study of the partitioning of Fe and Mg between garnet and orthopyroxene. Contributions To Mineralogy and Petrology, 1984, 86, 359-373.	3.1	603
2	Zircon Behaviour and the Thermal Histories of Mountain Chains. Elements, 2007, 3, 25-30.	0.5	535
3	Refining the Pâ€“T records of UHT crustal metamorphism. Journal of Metamorphic Geology, 2008, 26, 125-154.	3.4	294
4	An integrated microtextural and chemical approach to zircon geochronology: refining the Archaean history of the Napier Complex, east Antarctica. Contributions To Mineralogy and Petrology, 2005, 149, 57-84.	3.1	291
5	How Does the Continental Crust Get Really Hot?. Elements, 2011, 7, 235-240.	0.5	281
6	Garnetâ€“orthopyroxene barometry for granulites and peridotites. Nature, 1982, 300, 697-701.	27.8	269
7	On the occurrence and characterization of ultrahigh-temperature crustal metamorphism. Geological Society Special Publication, 1998, 138, 81-107.	1.3	257
8	The Solubility of Alumina in Orthopyroxene Coexisting with Garnet in FeO-MgO--Al2O3--SiO2 and CaO--FeO--MgO--Al2O3--SiO2. Journal of Petrology, 1984, 25, 665-696.	2.8	241
9	Partial melting and phase relations in high-grade metapelites: an experimental petrogenetic grid in the KFMASH system. Contributions To Mineralogy and Petrology, 1995, 120, 270-291.	3.1	235
10	Accessory phase controls on the geochemistry of crustal melts and restites produced during water-undersaturated partial melting. Contributions To Mineralogy and Petrology, 1993, 114, 550-566.	3.1	219
11	The Influence of Retrograde Cation Exchange on Granulite P-T Estimates and a Convergence Technique for the Recovery of Peak Metamorphic Conditions. Journal of Petrology, 1994, 35, 543-576.	2.8	196
12	Extremely high solubility of rutile in chloride and fluoride-bearing metamorphic fluids: An experimental investigation. Geology, 2010, 38, 323-326.	4.4	172
13	Extending our understanding of Ultrahigh temperature crustal metamorphism. Journal of Mineralogical and Petrological Sciences, 2004, 99, 140-158.	0.9	167
14	Al zoning in orthopyroxene in a sapphirine quartzite: evidence for >1120â€‰Â°C UHT metamorphism in the Napier Complex, Antarctica, and implications for the entropy of sapphirine. Contributions To Mineralogy and Petrology, 2000, 138, 293-307.	3.1	156
15	Garnet-Orthopyroxene Bearing Granulites from Enderby Land, Antarctica: Metamorphic Pressure Temperature-Time Evolution of the Archaean Napier Complex. Journal of Petrology, 1985, 26, 819-856.	2.8	152
16	The impact of zirconâ€“garnet REE distribution data on the interpretation of zircon Uâ€“Pb ages in complex high-grade terrains: An example from the Rauer Islands, East Antarctica. Chemical Geology, 2007, 241, 62-87.	3.3	141
17	Deformation-induced trace element redistribution in zircon revealed using atom probe tomography. Nature Communications, 2016, 7, 10490.	12.8	137
18	A matter of time: The importance of the duration of UHT metamorphism. Journal of Mineralogical and Petrological Sciences, 2016, 111, 50-72.	0.9	132

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19	Experimental determination of <scp>REE</scp> partition coefficients between zircon, garnet and melt: a key to understanding highâ€T crustal processes. Journal of Metamorphic Geology, 2015, 33, 231-248.	3.4	128
20	Zircon growth in UHT leucosome: constraints from zircon-garnet rare earth elements (REE) relations in Napier Complex, East Antarctica. Journal of Mineralogical and Petrological Sciences, 2004, 99, 180-190.	0.9	118
21	Proterozoic Granulites from the Rauer Group, East Antarctica. I. Decompressional Pressure-Temperature Paths Deduced from Mafic and Felsic Gneisses. Journal of Petrology, 1988, 29, 1059-1095.	2.8	115
22	Two stages of zircon and monazite growth in anatectic leucogneiss: SHRIMP constraints on the duration and intensity of Pan-African metamorphism in Prydz Bay, East Antarctica. Terra Nova, 1997, 9, 47-51.	2.1	115
23	Geochronology and trace element geochemistry of zircon, monazite and garnet from the garnetite and/or associated other high-grade rocks: Implications for Palaeoproterozoic tectonothermal evolution of the Khondalite Belt, North China Craton. Precambrian Research, 2013, 237, 78-100.	2.7	103
24	Wollastonite--Scapolite Assemblages as Indicators of Granulite Pressure-Temperature-Fluid Histories: The Rauer Group, East Antarctica. Journal of Petrology, 1992, 33, 693-728.	2.8	100
25	Complexity in the behavior and recrystallization of monazite during high-T metamorphism and fluid infiltration. Chemical Geology, 2012, 322-323, 192-208.	3.3	100
26	New Constraints from Garnetite on the P-T Path of the Khondalite Belt: Implications for the Tectonic Evolution of the North China Craton. Journal of Petrology, 2013, 54, 1725-1758.	2.8	96
27	A Reappraisal of the Pressureâ€Temperature Path of Granulites from the Kerala Khondalite Belt, Southern India. Journal of Geology, 2000, 108, 687-703.	1.4	89
28	Archaean-Cambrian crustal development of East Antarctica: metamorphic characteristics and tectonic implications. Geological Society Special Publication, 2003, 206, 203-230.	1.3	89
29	Antarctica and supercontinent evolution: historical perspectives, recent advances and unresolved issues. Geological Society Special Publication, 2013, 383, 1-34.	1.3	89
30	Pb isotopic composition, colour, and microstructure of monazites from a polymetamorphic rock in Antarctica. Contributions To Mineralogy and Petrology, 1984, 85, 141-148.	3.1	75
31	The geochronology, structure and metamorphism of early Archaean rocks at Fyfe Hills, Enderby Land, Antarctica. Precambrian Research, 1983, 21, 197-222.	2.7	70
32	Geological relationships in highâ€grade gneiss of the Brattstrand Bluffs coastline, Prydz Bay, East Antarctica. Australian Journal of Earth Sciences, 1991, 38, 497-519.	1.0	70
33	Precambrian geological relationships in highâ€grade gneisses of the Rauer Islands, east Antarctica. Australian Journal of Earth Sciences, 1987, 34, 175-207.	1.0	69
34	Cordierite as a sensor of fluid conditions in high-grade metamorphism and crustal anatexis. Journal of Metamorphic Geology, 2002, 20, 71-86.	3.4	69
35	Accessory Mineral Behaviour in Granulite Migmatites: a Case Study from the Kerala Khondalite Belt, India. Journal of Petrology, 2014, 55, 1965-2002.	2.8	66
36	A pyroxene-bearing meta-ironstone and other pyroxene-granulites from Tonagh Island, Enderby Land, Antarctica: further evidence for very high temperature (> 980Â°C) Archaean regional metamorphism in the Napier Complex. Journal of Metamorphic Geology, 1987, 5, 341-356.	3.4	65

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37	Anatexis during High-pressure Crustal Metamorphism: Evidence from Garnetâ€“Whole-rock REE Relationships and Zirconâ€“Rutile Tiâ€“Zr Thermometry in Leucogranulites from the Bohemian Massif. Journal of Petrology, 2010, 51, 1967-2001.	2.8	59
38	Geochronology and geological evolution of metamorphic rocks in the Field Islands area, East Antarctica. Journal of Metamorphic Geology, 1983, 1, 277-303.	3.4	58
39	A sapphirine-cordierite-garnet-sillimanite granulite from Enderby Land, Antarctica: implications for FMAS petrogenetic grids in the granulite facies. Contributions To Mineralogy and Petrology, 1986, 94, 452-460.	3.1	55
40	Monazite behaviour and age significance in poly-metamorphic high-grade terrains: A case study from the western Musgrave Block, central Australia11Abbreviations: After Kretz, 1983.. Lithos, 2006, 88, 100-134.	1.4	54
41	A petrogenetic grid for aluminous granulite facies metapelites in the KFMASH system. Journal of Metamorphic Geology, 2001, 19, 45-59.	3.4	52
42	Preservation of evidence for prograde metamorphism in ultrahigh-temperature, high-pressure kyanite-bearing granulites, South Harris, Scotland. Journal of Metamorphic Geology, 2006, 24, 263-279.	3.4	51
43	Mesoproterozoic geology of the Nampula Block, northern Mozambique: Tracing fragments of Mesoproterozoic crust in the heart of Gondwana. Precambrian Research, 2010, 182, 124-148.	2.7	51
44	Paragenetic and mineral-chemical relationships in orthoamphibole-bearing gneisses from Enderby Land, east Antarctica: a record of Proterozoic uplift. Journal of Metamorphic Geology, 1985, 3, 179-200.	3.4	49
45	Wollastonite at Nuliyam, Kerala, southern India: a reassessment of CO2-infiltration and charnockite formation at a classic locality. Contributions To Mineralogy and Petrology, 1995, 120, 83-94.	3.1	49
46	Chapter 8 Proterozoic Granulite Terranes. Neoproterozoic-Cambrian Tectonics, Global Change and Evolution: A Focus on South Western Gondwana, 1992, 10, 301-359.	0.2	48
47	Boron isotopes in tourmaline from the ca. 3.7â€“3.8Ga Isua supracrustal belt, Greenland: Sources for boron in Eoarchean continental crust and seawater. Geochimica Et Cosmochimica Acta, 2015, 163, 156-177.	3.9	48
48	Orthopyroxene-Corundum in Mg-Al-rich Granulites from the Oygarden Islands, East Antarctica. Journal of Petrology, 2004, 45, 1481-1512.	2.8	46
49	Lowâ€Pâ€Š/â€Šhighâ€Tmetamorphism in the Okiep Copper District, western Namaqualand, South Africa. Journal of Metamorphic Geology, 1998, 16, 281-305.	3.4	42
50	Reaction textures in scapoliteâ€“wollastoniteâ€“grossular calc-silicate rock from the Kerala Khondalite Belt, Southern India: evidence for high-temperature metamorphism and initial cooling. Lithos, 1998, 44, 83-99.	1.4	42
51	New SIMS Uâ€“Pb zircon ages from the Langavat Belt, South Harris, NW Scotland: implications for the Lewisian terrane model. Journal of the Geological Society, 2008, 165, 967-981.	2.1	40
52	Lattice distortion in a zircon population and its effects on trace element mobility and Uâ€“Thâ€“Pb isotope systematics: examples from the Lewisian Gneiss Complex, northwest Scotland. Contributions To Mineralogy and Petrology, 2013, 166, 21-41.	3.1	40
53	Reactions and textures in wollastonite-scapolite granulites and their significance for pressure-temperature-fluid histories of high-grade terranes. Precambrian Research, 1994, 66, 309-323.	2.7	39
54	Luâ€“Hf systematics of the ultra-high temperature Napier Metamorphic Complex in Antarctica: Evidence for the early Archean differentiation of Earth's mantle. Earth and Planetary Science Letters, 2006, 246, 305-316.	4.4	38

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55	Sedimentary provenance and age of metamorphism of the Vestfold Hills, East Antarctica: Evidence for a piece of Chinese Antarctica?. Precambrian Research, 2012, 196-197, 23-45.	2.7	38
56	Boron isotopic composition of tourmaline, prismatine, and grandidierite from granulite facies paragneisses in the Larsemann Hills, Prydz Bay, East Antarctica: Evidence for a non-marine evaporite source. Geochimica Et Cosmochimica Acta, 2013, 123, 261-283.	3.9	38
57	Comparison of the Garnet--Orthopyroxene Geobarometer with Recent Experimental Studies, and Applications to Natural Assemblages. Journal of Petrology, 1984, 25, 697-712.	2.8	37
58	Diffusion metasomatism in silica-undersaturated sapphirine-bearing granulite from Rumdoodle Peak, Framnes Mountains, east Antarctica. Contributions To Mineralogy and Petrology, 1999, 134, 264-276.	3.1	35
59	New evidence for Palaeoproterozoic high grade metamorphism in the Trivandrum Block, Southern India. Precambrian Research, 2016, 280, 120-138.	2.7	35
60	The retrogradePâ€“Tâ€“tpath for lowâ€pressure granulites from the Reynolds Range, central Australia: petrological constraints and implications for lowâ€P/highâ€Tmetamorphism. Journal of Metamorphic Geology, 1998, 16, 511-529.	3.4	34
61	FTIR microspectroscopy and SIMS study of water-poor cordierite from El Hoyazo, Spain: Application to mineral and melt devolatilization. Lithos, 2009, 113, 498-506.	1.4	32
62	The Archaean geological evolution of Enderby Land, Antarctica. Geological Society Special Publication, 1987, 27, 285-296.	1.3	31
63	Alumina solubility in orthopyroxene coexisting with sapphirine and quartz. Contributions To Mineralogy and Petrology, 2003, 144, 473-483.	3.1	31
64	Sapphirine granulites from the Vestfold Hills, East Antarctica: geochemical and metamorphic evolution. Antarctic Science, 1993, 5, 389-402.	0.9	30
65	Late Archaean granulite facies metamorphism in the Vestfold Hills, East Antarctica. Lithos, 2007, 93, 39-67.	1.4	27
66	The distribution of H2Oâ€“CO2 between cordierite and granitic melt under fluid-saturated conditions at 5ÂkbarÂ and 900ÂÂ°C. Contributions To Mineralogy and Petrology, 2001, 142, 107-118.	3.1	26
67	Chapter 3.2 Ancient Antarctica: The Archaean of the East Antarctic Shield. Neoproterozoic-Cambrian Tectonics, Global Change and Evolution: A Focus on South Western Gondwana, 2007, 15, 149-186.	0.2	25
68	Corundum inclusions in diamondsâ€"discriminatory criteria and a corundum compositional datasetâ˜†. Lithos, 2004, 77, 273-286.	1.4	24
69	Geomorphology and glacial history of Rauer Group, East Antarctica. Quaternary Research, 2009, 72, 80-90.	1.7	24
70	Zr-in-rutile resetting in aluminosilicate bearing ultra-high temperature granulites: Refining the record of cooling and hydration in the Napier Complex, Antarctica. Lithos, 2017, 272-273, 128-146.	1.4	24
71	Testing the fidelity of thermometers at ultrahigh temperatures. Journal of Metamorphic Geology, 2019, 37, 917-934.	3.4	24
72	Local processes involved in the generation of migmatites within mafic granulites. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 1988, 79, 209-222.	0.3	23

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73	Peak and postâ€“peak development of UHT metamorphism at Mather Peninsula, Rauer Islands: Zircon and monazite Uâ€“Thâ€“Pb and REE chemistry constraints. Journal of Mineralogical and Petrological Sciences, 2016, 111, 89-103.	0.9	23
74	Granulite facies metasomatism: zoned calc-silicate boudins from the Rauer Group, East Antarctica. Contributions To Mineralogy and Petrology, 1993, 113, 557-571.	3.1	22
75	Ultrahigh temperature deformation microstructures in felsic granulites of the Napier Complex, Antarctica. Tectonophysics, 2006, 427, 133-151.	2.2	21
76	Temperatureâ€“time evolution of the Assynt Terrane of the Lewisian Gneiss Complex of Northwest Scotland from zircon U-Pb dating and Ti thermometry. Precambrian Research, 2015, 260, 55-75.	2.7	21
77	Neoproterozoic evolution and Cambrian reworking of ultrahigh temperature granulites in the Eastern Ghats Province, India. Journal of Metamorphic Geology, 2019, 37, 977-1006.	3.4	21
78	Pb isotopic domains from the Indian Ocean sector of Antarctica: implications for past Antarcticaâ€“India connections. Geological Society Special Publication, 2013, 383, 59-72.	1.3	20
79	A window into the lower crust: Trace element systematics and the occurrence of inclusions/intergrowths in granulite-facies rutile. Gondwana Research, 2018, 59, 76-86.	6.0	20
80	Titanium-bearing sapphirine in a partially melted aluminous granulite xenolith, Vestfold Hills, Antarctica: geological and mineralogical implications. European Journal of Mineralogy, 1995, 7, 637-654.	1.3	18
81	Quantitative analysis of H2O and CO2 in cordierite using polarized FTIR spectroscopy. Contributions To Mineralogy and Petrology, 2012, 164, 881-894.	3.1	18
82	Sodium and potassium in cordierite a potential thermometer for melts?. European Journal of Mineralogy, 2002, 14, 459-469.	1.3	17
83	Mg-Al yttrian zirconolite in a partially melted sapphirine granulite, Vestfold Hills, East Antarctica. Mineralogical Magazine, 1994, 58, 259-269.	1.4	16
84	High-temperature granulites. Nature, 1990, 347, 132-133.	27.8	14
85	Late Variscan (315 Ma) subduction or deceptive zircon REE patterns and Uâ€“Pb dates from migmatiteâ€hosted eclogites? (Montagne Noire, France). Journal of Metamorphic Geology, 2022, 40, 39-65.	3.4	13
86	The influence of cordierite on melting and mineral-melt equilibria in ultra-high-temperature metamorphism. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2004, 95, 87-98.	0.3	10
87	Ancient Antarctica. , 2019, , 865-897.		6
88	Timing and mechanisms of carbon isotope exchange in granulite-facies calc-silicate boudins, Rauer Group, East Antarctica. American Mineralogist, 1997, 82, 392-404.	1.9	5
89	Geological repositories: scientific priorities and potential high-technology transfer from the space and physics sectors. Mineralogical Magazine, 2015, 79, 1651-1664.	1.4	3
90	Reducing mantle redox options. Nature, 1990, 348, 394-394.	27.8	2

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91	Upwardly mobile hot crust. Nature, 1995, 375, 451-452.	27.8	2
92	Neoarchean magmatism in the southern Scott and Raggatt Mountains, Napier Complex, east Antarctica. Precambrian Research, 2022, 370, 106530.	2.7	2
93	The influence of cordierite on melting and mineral-melt equilibria in ultra-high-temperature metamorphism. , 2004, , .		1
94	Metamorphism in orogeny. , 0, , 193-258.		0