

Roger Powell

List of Publications by Year in descending order

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75
papers

21,575
citations

36203

51
h-index

79541

73
g-index

79
all docs

79
docs citations

79
times ranked

4643
citing authors

#	ARTICLE	IF	CITATIONS
1	An internally consistent thermodynamic data set for phases of petrological interest. <i>Journal of Metamorphic Geology</i> , 2004, 16, 309-343.	1.6	4,091
2	An improved and extended internally consistent thermodynamic dataset for phases of petrological interest, involving a new equation of state for solids. <i>Journal of Metamorphic Geology</i> , 2011, 29, 333-383.	1.6	1,660
3	An internally consistent dataset with uncertainties and correlations: 3. Applications to geobarometry, worked examples and a computer program. <i>Journal of Metamorphic Geology</i> , 1988, 6, 173-204.	1.6	1,406
4	Activity-composition relations for phases in petrological calculations: an asymmetric multicomponent formulation. <i>Contributions To Mineralogy and Petrology</i> , 2003, 145, 492-501.	1.2	1,135
5	An enlarged and updated internally consistent thermodynamic dataset with uncertainties and correlations: the system $K_2O-Na_2O-CaO-MgO-MnO-FeO-Fe_2O_3-Al_2O_3-TiO_2-SiO_2-C_2H_2O_2$. <i>Journal of Metamorphic Geology</i> , 1990, 8, 89-124.	1.6	1,112
6	Progress relating to calculation of partial melting equilibria for metapelites. <i>Journal of Metamorphic Geology</i> , 2007, 25, 511-527.	1.6	944
7	Calculating phase diagrams involving solid solutions via nonlinear equations, with examples using THERMOCALC. <i>Journal of Metamorphic Geology</i> , 1998, 16, 577-588.	1.6	846
8	New mineral activity-composition relations for thermodynamic calculations in metapelitic systems. <i>Journal of Metamorphic Geology</i> , 2014, 32, 261-286.	1.6	821
9	A garnet-hornblende geothermometer: calibration, testing, and application to the Pelona Schist, Southern California. <i>Journal of Metamorphic Geology</i> , 1984, 2, 13-31.	1.6	670
10	Mixing properties and activity-composition relationships of chlorites in the system $MgO-FeO-Al_2O_3-SiO_2-H_2O$. <i>European Journal of Mineralogy</i> , 1998, 10, 395-406.	0.4	591
11	Regression diagnostics and robust regression in geothermometer/geobarometer calibration: the garnet-clinopyroxene geothermometer revisited. <i>Journal of Metamorphic Geology</i> , 1985, 3, 231-243.	1.6	572
12	An order-disorder model for omphacitic pyroxenes in the system jadeite-diopside-hedenbergite-acmite, with applications to eclogitic rocks. <i>American Mineralogist</i> , 2007, 92, 1181-1189.	0.9	472
13	On thermobarometry. <i>Journal of Metamorphic Geology</i> , 2008, 26, 155-179.	1.6	443
14	Relating formulations of the thermodynamics of mineral solid solutions; activity modeling of pyroxenes, amphiboles, and micas. <i>American Mineralogist</i> , 1999, 84, 1-14.	0.9	442
15	A new thermodynamic model for clino- and orthoamphiboles in the system $Na_2O-CaO-FeO-MgO-Al_2O_3-O_3-SiO_2-H_2O$. <i>Journal of Metamorphic Geology</i> , 2007, 25, 631-656.	1.6	400
16	Thermodynamics of order-disorder in minerals; II, Symmetric formalism applied to solid solutions. <i>American Mineralogist</i> , 1996, 81, 1425-1437.	0.9	390
17	Melt loss and the preservation of granulite facies mineral assemblages. <i>Journal of Metamorphic Geology</i> , 2002, 20, 621-632.	1.6	363
18	The effect of Mn on mineral stability in metapelites revisited: new activity relations for manganese-bearing minerals. <i>Journal of Metamorphic Geology</i> , 2014, 32, 809-828.	1.6	357

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19	The effect of Mn on mineral stability in metapelites. <i>Journal of Metamorphic Geology</i> , 1997, 15, 223-238.	1.6	287
20	A thermodynamic model for Ca-Na clinoamphiboles in Na ₂ O-CaO-FeO-MgO-Al ₂ O ₃ -SiO ₂ -H ₂ O for petrological calculations. <i>Journal of Metamorphic Geology</i> , 2005, 23, 771-791.	1.6	264
21	H ₂ O in metamorphism and unexpected behaviour in the preservation of metamorphic mineral assemblages. <i>Journal of Metamorphic Geology</i> , 2001, 19, 445-454.	1.6	245
22	Spatially-focussed melt formation in aluminous metapelites from Broken Hill, Australia. <i>Journal of Metamorphic Geology</i> , 2005, 22, 825-845.	1.6	236
23	Revised activity-composition models for clinopyroxene and amphibole. <i>Journal of Metamorphic Geology</i> , 2012, 30, 131-142.	1.6	235
24	An internally consistent thermodynamic dataset with uncertainties and correlations: 1. Methods and a worked example. <i>Journal of Metamorphic Geology</i> , 1985, 3, 327-342.	1.6	201
25	An internally consistent thermodynamic dataset with uncertainties and correlations: 2. Data and results. <i>Journal of Metamorphic Geology</i> , 1985, 3, 343-370.	1.6	188
26	Progress in linking accessory mineral growth and breakdown to major mineral evolution in metamorphic rocks: a thermodynamic approach in the Na ₂ O-CaO-K ₂ O-FeO-MgO-Al ₂ O ₃ -SiO ₂ -H ₂ O system. <i>Journal of Metamorphic Geology</i> , 2011, 29, 151-166.	1.6	188
27	Metamorphism in Archaean greenstone belts: calculated fluid compositions and implications for gold mineralization. <i>Journal of Metamorphic Geology</i> , 1991, 9, 141-150.	1.6	170
28	Some remarks on high-temperature/low-pressure metamorphism in convergent orogens. <i>Journal of Metamorphic Geology</i> , 1991, 9, 333-340.	1.6	148
29	Melting of Peridotites through to Granites: A Simple Thermodynamic Model in the System KNCFMASHTOCr. <i>Journal of Petrology</i> , 2018, 59, 881-900.	1.1	139
30	Phase relations in high-pressure metapelites in the system KFMASH (K ₂ O-FeO-MgO-Al ₂ O ₃ -SiO ₂ -H ₂ O) with application to natural rocks. <i>Contributions To Mineralogy and Petrology</i> , 2003, 145, 301-315.	1.2	130
31	TRUTH AND BEAUTY IN METAMORPHIC PHASE-EQUILIBRIA: CONJUGATE VARIABLES AND PHASE DIAGRAMS. <i>Canadian Mineralogist</i> , 2005, 43, 21-33.	0.3	119
32	Retrograde melt-residue interaction and the formation of near-anhydrous leucosomes in migmatites. <i>Journal of Metamorphic Geology</i> , 2010, 28, 579-597.	1.6	109
33	Calculated phase equilibria involving chemical potentials to investigate the textural evolution of metamorphic rocks. <i>Journal of Metamorphic Geology</i> , 2008, 26, 181-198.	1.6	101
34	Low-pressure granulite facies metapelitic assemblages and corona textures from MacRobertson Land, east Antarctica: the importance of Fe ₂ O ₃ and TiO ₂ in accounting for spinel-bearing assemblages. <i>Journal of Metamorphic Geology</i> , 1989, 7, 323-335.	1.6	92
35	Thermodynamics of order-disorder in minerals; I, Symmetric formalism applied to minerals of fixed composition. <i>American Mineralogist</i> , 1996, 81, 1413-1424.	0.9	92
36	Metamorphism in the Olary Block, South Australia: compression with cooling in a Proterozoic fold belt. <i>Journal of Metamorphic Geology</i> , 1987, 5, 291-306.	1.6	90

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37	Calcite-dolomite geothermometry in the system $\text{CaCO}_3\text{-MgCO}_3\text{-FeCO}_3$: an experimental study. <i>Journal of Metamorphic Geology</i> , 1984, 2, 33-41.	1.6	89
38	Metamorphic evolution of aluminous granulites from Labwor Hills, Uganda. <i>Contributions To Mineralogy and Petrology</i> , 1987, 95, 217-225.	1.2	88
39	Grain-scale pressure variations and chemical equilibrium in high-grade metamorphic rocks. <i>Journal of Metamorphic Geology</i> , 2014, 32, 195-207.	1.6	80
40	Calculated mineral equilibria in the greenschist-blueschist-eclogite facies in $\text{Na}_2\text{O-FeO-MgO-Al}_2\text{O}_3\text{-SiO}_2\text{-H}_2\text{O}$. <i>Contributions To Mineralogy and Petrology</i> , 1990, 104, 85-98.	1.2	79
41	Garnet porphyroblast-bearing leucosomes in metapelites: mechanisms, phase diagrams, and an example from Broken Hill, Australia. , 1990, , 105-123.		79
42	Decompressional coronas and symplectites in granulites of the Musgrave Complex, central Australia. <i>Journal of Metamorphic Geology</i> , 1991, 9, 441-450.	1.6	76
43	On the interpretation of retrograde reaction textures in granulite facies rocks. <i>Journal of Metamorphic Geology</i> , 2011, 29, 131-149.	1.6	74
44	(Th+U)-Pb monazite ages from Al-Mg-rich metapelites, Rauer Group, east Antarctica. <i>Contributions To Mineralogy and Petrology</i> , 2003, 146, 326-340.	1.2	73
45	Ultrahigh-pressure garnet peridotites from the devolatilization of sea-floor hydrated ultramafic rocks. <i>Journal of Metamorphic Geology</i> , 2008, 26, 695-716.	1.6	71
46	A new thermodynamic model for sapphirine: calculated phase equilibria in $\text{K}_2\text{O-FeO-MgO-Al}_2\text{O}_3\text{-SiO}_2\text{-H}_2\text{O-TiO}_2$. <i>Journal of Metamorphic Geology</i> , 2014, 32, 287-299.		68
47	Improving isochron calculations with robust statistics and the bootstrap. <i>Chemical Geology</i> , 2002, 185, 191-204.	1.4	66
48	Thermal and baric evolution of garnet granulites from Sri Lanka. <i>Journal of Metamorphic Geology</i> , 1988, 6, 351-364.	1.6	62
49	On parameterizing thermodynamic descriptions of minerals for petrological calculations. <i>Journal of Metamorphic Geology</i> , 2014, 32, 245-260.	1.6	61
50	Metapelitic granulites from Jetty Peninsula, east Antarctica: formation during a single event or by polymetamorphism?. <i>Journal of Metamorphic Geology</i> , 1994, 12, 557-573.	1.6	59
51	Palaeozoic Intraplate Crustal Anatexis in the Mount Painter Province, South Australia: Timing, Thermal Budgets and the Role of Crustal Heat Production. <i>Journal of Petrology</i> , 2006, 47, 2281-2302.	1.1	59
52	Using equilibrium thermodynamics in the study of metasomatic alteration, illustrated by an application to serpentinites. <i>Lithos</i> , 2013, 168-169, 67-84.	0.6	57
53	The stability of sapphirine+quartz: calculated phase equilibria in $\text{FeO-MgO-Al}_2\text{O}_3\text{-SiO}_2\text{-TiO}_2$. <i>Journal of Metamorphic Geology</i> , 2010, 28, 615-633.	1.6	53
54	The P-T-deformation path for a mid-Proterozoic, low-pressure terrane: the Reynolds Range, central Australia. <i>Journal of Metamorphic Geology</i> , 1991, 9, 641-661.	1.6	51

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55	Using calculated chemical potential relationships to account for coronas around kyanite: an example from the Bohemian Massif. <i>Journal of Metamorphic Geology</i> , 2010, 28, 97-116.	1.6	51
56	The effect of subduction on the sulphur, carbon and redox budget of lithospheric mantle. <i>Journal of Metamorphic Geology</i> , 2015, 33, 649-670.	1.6	51
57	Using calculated chemical potential relationships to account for replacement of kyanite by symplectite in high pressure granulites. <i>Journal of Metamorphic Geology</i> , 2015, 33, 311-330.	1.6	44
58	Proterozoic granulite facies metamorphism in the southeastern Reynolds Range, central Australia: geological context, P-T path and overprinting relationships. <i>Journal of Metamorphic Geology</i> , 1991, 9, 267-281.	1.6	40
59	A calculated petrogenetic grid for ultramafic rocks in the system CaO-FeO-MgO-Al ₂ O ₃ -SiO ₂ -CO ₂ -H ₂ O at low pressures. <i>Contributions To Mineralogy and Petrology</i> , 1990, 105, 347-358.	1.2	39
60	Hydration of orthopyroxene-cordierite-bearing assemblages at Laouni, Central Hoggar, Algeria. <i>Journal of Metamorphic Geology</i> , 1996, 14, 467-476.	1.6	33
61	Did the Delamerian Orogeny Start in the Neoproterozoic?. <i>Journal of Geology</i> , 2009, 117, 575-583.	0.7	32
62	Evidence for a Variscan suture zone in the Vendée, France: a petrological study of blueschist facies rocks from Bois de Cenac. <i>Journal of Metamorphic Geology</i> , 1987, 5, 225-237.	1.6	31
63	Viscous relaxation of grain-scale pressure variations. <i>Journal of Metamorphic Geology</i> , 2015, 33, 859-868.	1.6	31
64	On equilibrium in non-hydrostatic metamorphic systems. <i>Journal of Metamorphic Geology</i> , 2018, 36, 419-438.	1.6	28
65	Garnet and spinel lherzolite assemblages in MgO-Al ₂ O ₃ -SiO ₂ and CaO-MgO-Al ₂ O ₃ -SiO ₂ : thermodynamic models and an experimental conflict. <i>Journal of Metamorphic Geology</i> , 2012, 30, 561-577.	1.6	27
66	Robust isochron calculation. <i>Geochronology</i> , 2020, 2, 325-342.	1.0	21
67	A method for activity calculations in saline and mixed solvent solutions at elevated temperature and pressure: A framework for geological phase equilibria calculations. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 5488-5506.	1.6	20
68	Corona textures between kyanite, garnet and gedrite in gneisses from Errabiddy, Western Australia. <i>Journal of Metamorphic Geology</i> , 1987, 5, 357-370.	1.6	18
69	Intermediate granulite produced by transformation of eclogite at a felsic granulite contact, in Blanský les, Bohemian Massif. <i>Journal of Metamorphic Geology</i> , 2014, 32, 347-370.	1.6	17
70	The truth and beauty of chemical potentials. <i>Journal of Metamorphic Geology</i> , 2019, 37, 1007-1019.	1.6	17
71	A thermodynamic model for feldspars in KAlSi ₃ O ₈ -NaAlSi ₃ O ₈ -CaAl ₂ Si ₂ O ₈ for mineral equilibrium calculations. <i>Journal of Metamorphic Geology</i> , 2022, 40, 587-600.	1.6	13
72	How well known are the thermodynamics of Fe-Mg-Ca garnet? Evidence from experimentally determined exchange equilibria. <i>Journal of Metamorphic Geology</i> , 2004, 14, 75-84.	1.6	13

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73	Mantle-like Hf Nd isotope signatures in ~3.5 Ga greenstones: No evidence for Hadean crust beneath the East Pilbara Craton. <i>Chemical Geology</i> , 2021, 576, 120273.	1.4	8
74	Matrix analysis of metamorphic mineral assemblages and reactions: alternatives and extensions. <i>Contributions To Mineralogy and Petrology</i> , 1990, 106, 61-65.	1.2	1
75	Calculated phase equilibria for high-pressure serpentinites and compositionally related rocks close to the MgO-Al ₂ O ₃ -SiO ₂ -H ₂ O (MASH) system. <i>Journal of Metamorphic Geology</i> , 0, , .	1.6	0