Roger Powell

List of Publications by Year
in descending order

75 papers	21,575 citations	36303 51 h-index	79698 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. Journal of Metamorphic Geology, 2004, 16, 309-343.	3.4	4,091
2	An improved and extended internally consistent thermodynamic dataset for phases of petrological interest, involving a new equation of state for solids. Journal of Metamorphic Geology, 2011, 29, 333-383.	3.4	1,660
3	An internally consistent dataset with uncertainties and correlations: 3. Applications to geobarometry, worked examples and a computer program. Journal of Metamorphic Geology, 1988, 6, 173-204.	3.4	1,406
4	Activity?composition relations for phases in petrological calculations: an asymmetric multicomponent formulation. Contributions To Mineralogy and Petrology, 2003, 145, 492-501.	3.1	1,135
5	An enlarged and updated internally consistent thermodynamic dataset with uncertainties and correlations: the system K2O?Na2O?CaO?MgO?MnO?FeO?Fe2O3?Al2O3?TiO2?SiO2?C?H2?O2. Journal of Metamorphic Geology, 1990, 8, 89-124.	3.4	1,112
6	Progress relating to calculation of partial melting equilibria for metapelites. Journal of Metamorphic Geology, 2007, 25, 511-527.	3.4	944
7	Calculating phase diagrams involving solid solutions via nonâ€linear equations, with examples using THERMOCALC. Journal of Metamorphic Geology, 1998, 16, 577-588.	3.4	846
8	New mineral activityâ€“composition relations for thermodynamic calculations in metapelitic systems. Journal of Metamorphic Geology, 2014, 32, 261-286.	3.4	821
9	A garnet?hornblende geothermometer: calibration, testing, and application to the Pelona Schist, Southern California. Journal of Metamorphic Geology, 1984, 2, 13-31.	3.4	670
10	Mixing properties and activity-composition relationships of chlorites in the system MgO-FeO-Al2O3-SiO2-H2O. European Journal of Mineralogy, 1998, 10, 395-406.	1.3	591
11	Regression diagnostics and robust regression in geothermometer/geobarometer calibration: the garnet-clinopyroxene geothermometer revisited. Journal of Metamorphic Geology, 1985, 3, 231-243.	3.4	572
12	An order-disorder model for omphacitic pyroxenes in the system jadeite-diopside-hedenbergite-acmite, with applications to eclogitic rocks. American Mineralogist, 2007, 92, 1181-1189.	1.9	472
13	On thermobarometry. Journal of Metamorphic Geology, 2008, 26, 155-179.	3.4	443
14	Relating formulations of the thermodynamics of mineral solid solutions; activity modeling of pyroxenes, amphiboles, and micas. American Mineralogist, 1999, 84, 1-14.	1.9	442
15	A new thermodynamic model for clinoâ€and orthoamphiboles in the system Na₂Oâ€“CaOâ€“FeOâ€“MgOâ€“Al₂O₃â€“SiO₂â€“H₂<sub>Oâ€“O. Journal of Metamorphic Geology, 2007, 25, 631-656.	3.4	400
16	Thermodynamics of order-disorder in minerals; II, Symmetric formalism applied to solid solutions. American Mineralogist, 1996, 81, 1425-1437.	1.9	390
17	Melt loss and the preservation of granulite facies mineral assemblages. Journal of Metamorphic Geology, 2002, 20, 621-632.	3.4	363
18	The effect of Mn on mineral stability in metapelites revisited: new aâ€“x relations for manganeseâ€bearing minerals. Journal of Metamorphic Geology, 2014, 32, 809-828.	3.4	357

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19	The effect of Mn on mineral stability in metapelites. Journal of Metamorphic Geology, 1997, 15, 223-238.	3.4	287
20	A thermodynamic model for Ca-Na clinoamphiboles in Na2O-CaO-FeO-MgO-Al2O3-SiO2-H2O-O for petrological calculations. Journal of Metamorphic Geology, 2005, 23, 771-791.	3.4	264
21	H2 O in metamorphism and unexpected behaviour in the preservation of metamorphic mineral assemblages. Journal of Metamorphic Geology, 2001, 19, 445-454.	3.4	245
22	Spatially-focussed melt formation in aluminous metapelites from Broken Hill, Australia. Journal of Metamorphic Geology, 2005, 22, 825-845.	3.4	236
23	Revised activityâ€“composition models for clinopyroxene and amphibole. Journal of Metamorphic Geology, 2012, 30, 131-142.	3.4	235
24	An internally consistent thermodynamic dataset with uncertainties and correlations: 1. Methods and a worked example. Journal of Metamorphic Geology, 1985, 3, 327-342.	3.4	201
25	An internally consistent thermodynamic dataset with uncertainties and correlations: 2. Data and results. Journal of Metamorphic Geology, 1985, 3, 343-370.	3.4	188
26	Progress in linking accessory mineral growth and breakdown to major mineral evolution in metamorphic rocks: a thermodynamic approach in the Na₂Oâ€CaOâ€K₂Oâ€FeOâ€MgOâ€Al₂O₃â€SiO₂â€H₂O system. Journal of Metamorphic Geology, 2011, 29, 151-166.	3.4	188
27	Metamorphism in Archaean greenstone belts: calculated fluid compositions and implications for gold mineralization. Journal of Metamorphic Geology, 1991, 9, 141-150.	3.4	170
28	Some remarks on high-temperature?low-pressure metamorphism in convergent orogens. Journal of Metamorphic Geology, 1991, 9, 333-340.	3.4	148
29	Melting of Peridotites through to Granites: A Simple Thermodynamic Model in the System KNCFMASHTOCr. Journal of Petrology, 2018, 59, 881-900.	2.8	139
30	Phase relations in high-pressure metapelites in the system KFMASH (K2O?FeO?MgO?Al2O3?SiO2?H2O) with application to natural rocks. Contributions To Mineralogy and Petrology, 2003, 145, 301-315.	3.1	130
31	TRUTH AND BEAUTY IN METAMORPHIC PHASE-EQUILIBRIA: CONJUGATE VARIABLES AND PHASE DIAGRAMS. Canadian Mineralogist, 2005, 43, 21-33.	1.0	119
32	Retrograde meltâ€“residue interaction and the formation of nearâ€anhydrous leucosomes in migmatites. Journal of Metamorphic Geology, 2010, 28, 579-597.	3.4	109
33	Calculated phase equilibria involving chemical potentials to investigate the textural evolution of metamorphic rocks. Journal of Metamorphic Geology, 2008, 26, 181-198.	3.4	101
34	Low-pressure granulite facies metapelitic assemblages and corona textures from MacRobertson Land, east Antarctica: the importance of Fe2O3and TiO2in accounting for spinel-bearing assemblages. Journal of Metamorphic Geology, 1989, 7, 323-335.	3.4	92
35	Thermodynamics of order-disorder in minerals; I, Symmetric formalism applied to minerals of fixed composition. American Mineralogist, 1996, 81, 1413-1424.	1.9	92
36	Metamorphism in the Olary Block, South Australia: compression with cooling in a Proterozoic fold belt. Journal of Metamorphic Geology, 1987, 5, 291-306.	3.4	90

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37	Calcite?dolomite geothermometry in the system CaCO3?MgCO3?FeCO3: an experimental study. Journal of Metamorphic Geology, 1984, 2, 33-41.	3.4	89
38	Metamorphic evolution of aluminous granulites from Labwor Hills, Uganda. Contributions To Mineralogy and Petrology, 1987, 95, 217-225.	3.1	88
39	Grainâ€scale pressure variations and chemical equilibrium in highâ€grade metamorphic rocks. Journal of Metamorphic Geology, 2014, 32, 195-207.	3.4	80
40	Calculated mineral equilibria in the greenschist-blueschist-eclogite facies in Na2O?FeO?MgO?Al2O3?SiO2?H2O. Contributions To Mineralogy and Petrology, 1990, 104, 85-98.	3.1	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. Journal of Metamorphic Geology, 1991, 9, 441-450.	3.4	76
43	On the interpretation of retrograde reaction textures in granulite facies rocks. Journal of Metamorphic Geology, 2011, 29, 131-149.	3.4	74
44	(Th+U)-Pb monazite ages from Al-Mg-rich metapelites, Rauer Group, east Antarctica. Contributions To Mineralogy and Petrology, 2003, 146, 326-340.	3.1	73
45	Ultrahighâ€pressure garnet peridotites from the devolatilization of seaâ€floor hydrated ultramafic rocks. Journal of Metamorphic Geology, 2008, 26, 695-716.	3.4	71
46	A new thermodynamic model for sapphirine: calculated phase equilibria in K₂Oâ€“FeOâ€“MgOâ€“Al₂O₃â€“SiO₂â€“H₂Oâ€“TiO₂â€ Journal of Metamorphic Geology, 2014, 32, 287-299.	3.4	68
47	Improving isochron calculations with robust statistics and the bootstrap. Chemical Geology, 2002, 185, 191-204.	3.3	66
48	Thermal and baric evolution of garnet granulites from Sri Lanka. Journal of Metamorphic Geology, 1988, 6, 351-364.	3.4	62
49	On parameterizing thermodynamic descriptions of minerals for petrological calculations. Journal of Metamorphic Geology, 2014, 32, 245-260.	3.4	61
50	Metapelitic granulites from Jetty Peninsula, east Antarctica: formation during a single event or by polymetamorphism?. Journal of Metamorphic Geology, 1994, 12, 557-573.	3.4	59
51	Palaeozoic Intraplate Crustal Anatexis in the Mount Painter Province, South Australia: Timing, Thermal Budgets and the Role of Crustal Heat Production. Journal of Petrology, 2006, 47, 2281-2302.	2.8	59
52	Using equilibrium thermodynamics in the study of metasomatic alteration, illustrated by an application to serpentinites. Lithos, 2013, 168-169, 67-84.	1.4	57
53	The stability of sapphirineâ€ƒ+â€ƒquartz: calculated phase equilibria in FeOâ€“MgOâ€“Al₂O₃â€“SiO₂â€“TiO₂â€“O. Journal of Metamorphic Geology, 2010, 28, 615-633.	3.4	53
54	The P?T?deformation path for a mid-Proterozoic, low-pressure terrane: the Reynolds Range, central Australia. Journal of Metamorphic Geology, 1991, 9, 641-661.	3.4	51

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55	Using calculated chemical potential relationships to account for coronas around kyanite: an example from the Bohemian Massif. Journal of Metamorphic Geology, 2010, 28, 97-116.	3.4	51
56	The effect of subduction on the sulphur, carbon and redox budget of lithospheric mantle. Journal of Metamorphic Geology, 2015, 33, 649-670.	3.4	51
57	Using calculated chemical potential relationships to account for replacement of kyanite by symplectite in high pressure granulites. Journal of Metamorphic Geology, 2015, 33, 311-330.	3.4	44
58	Proterozoic granulite facies metamorphism in the southeastern Reynolds Range, central Australia: geological context, P?T path and overprinting relationships. Journal of Metamorphic Geology, 1991, 9, 267-281.	3.4	40
59	A calculated petrogenetic grid for ultramafic rocks in the system CaO-FeO-MgO-Al2O3-SiO2-CO2-H2O at low pressures. Contributions To Mineralogy and Petrology, 1990, 105, 347-358.	3.1	39
60	Hydration of orthopyroxene-cordierite-bearing assemblages at Laouni, Central Hoggar, Algeria. Journal of Metamorphic Geology, 1996, 14, 467-476.	3.4	33
61	Did the Delamerian Orogeny Start in the Neoproterozoic?. Journal of Geology, 2009, 117, 575-583.	1.4	32
62	Evidence for a Variscan suture zone in the VendÃ©e, France: a petrological study of blueschist facies rocks from Bois de CenÃ©. Journal of Metamorphic Geology, 1987, 5, 225-237.	3.4	31
63	Viscous relaxation of grainâ€scale pressure variations. Journal of Metamorphic Geology, 2015, 33, 859-868.	3.4	31
64	On equilibrium in nonâ€hydrostatic metamorphic systems. Journal of Metamorphic Geology, 2018, 36, 419-438.	3.4	28
65	Garnet and spinel lherzolite assemblages in MgOâ€“Al₂O₃â€“SiO₂ and CaOâ€“MgOâ€“Al₂O₃â€“SiO₂: thermodynamic models and an experimental conflict. Journal of Metamorphic Geology, 2012, 30, 561-577.	3.4	27
66	Robust isochron calculation. Geochronology, 2020, 2, 325-342.	2.5	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. Geochimica Et Cosmochimica Acta, 2006, 70, 5488-5506.	3.9	20
68	Corona textures between kyanite, garnet and gedrite in gneisses from Errabiddy, Western Australia. Journal of Metamorphic Geology, 1987, 5, 357-370.	3.4	18
69	Intermediate granulite produced by transformation of eclogite at a felsic granulite contact, in BlanskÃ½ les, Bohemian Massif. Journal of Metamorphic Geology, 2014, 32, 347-370.	3.4	17
70	The truth and beauty of chemical potentials. Journal of Metamorphic Geology, 2019, 37, 1007-1019.	3.4	17
71	A thermodynamic model for feldspars in KAlSi₃O₈â^’NaAlSi₃O₈â^’CaAl₂Si₂O₈ for mineral equilibrium calculations. Journal of Metamorphic Geology, 2022, 40, 587-600.	3.4	14
72	How well known are the thermodynamics of Fe-Mg-Ca garnet? Evidence from experimentally determined exchange equilibria. Journal of Metamorphic Geology, 2004, 14, 75-84.	3.4	13

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73	Mantle-like Hf Nd isotope signatures in ~3.5ÂGa greenstones: No evidence for Hadean crust beneath the East Pilbara Craton. Chemical Geology, 2021, 576, 120273.	3.3	8
74	Matrix analysis of metamorphic mineral assemblages and reactions: alternatives and extensions. Contributions To Mineralogy and Petrology, 1990, 106, 61-65.	3.1	1
75	Calculated phase equilibria for highâ€pressure serpentinites and compositionallyâ€related rocks close to the MgOâ€Al2O3â€SiO2â€H2O (MASH) system.. Journal of Metamorphic Geology, 0, , .	3.4	0