

# Roger Powell

## List of Publications by Citations

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74  
papers

17,306  
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79  
ext. papers

18,879  
ext. citations

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L-index

#	Paper	IF	Citations
74	An internally consistent thermodynamic data set for phases of petrological interest. <i>Journal of Metamorphic Geology</i> , <b>2004</b> , 16, 309-343	4.4	3233
73	An internally consistent dataset with uncertainties and correlations: 3. Applications to geobarometry, worked examples and a computer program. <i>Journal of Metamorphic Geology</i> , <b>1988</b> , 6, 173-204	4.4	1239
72	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> , <b>2011</b> , 29, 333-383	4.4	1103
71	An enlarged and updated internally consistent thermodynamic dataset with uncertainties and correlations: the system $K_2O-Na_2O-CaO-MgO-MnO-FeO-Fe_2O_3-Al_2O_3-TiO_2-SiO_2-H_2O$ . <i>Journal of Metamorphic Geology</i> , <b>1990</b> , 8, 89-124	4.4	911
70	Activity-composition relations for phases in petrological calculations: an asymmetric multicomponent formulation. <i>Contributions To Mineralogy and Petrology</i> , <b>2003</b> , 145, 492-501	3.5	857
69	Progress relating to calculation of partial melting equilibria for metapelites. <i>Journal of Metamorphic Geology</i> , <b>2007</b> , 25, 511-527	4.4	814
68	Calculating phase diagrams involving solid solutions via non-linear equations, with examples using THERMOCALC. <i>Journal of Metamorphic Geology</i> , <b>1998</b> , 16, 577-588	4.4	714
67	A garnet-hornblende geothermometer: calibration, testing, and application to the Pelona Schist, Southern California. <i>Journal of Metamorphic Geology</i> , <b>1984</b> , 2, 13-31	4.4	583
66	New mineral activity-composition relations for thermodynamic calculations in metapelitic systems. <i>Journal of Metamorphic Geology</i> , <b>2014</b> , 32, 261-286	4.4	525
65	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> , <b>1998</b> , 10, 395-406	2.2	514
64	Regression diagnostics and robust regression in geothermometer/geobarometer calibration: the garnet-clinopyroxene geothermometer revisited. <i>Journal of Metamorphic Geology</i> , <b>1985</b> , 3, 231-243	4.4	498
63	An order-disorder model for omphacitic pyroxenes in the system jadeite-diopside-hedenbergite-acmite, with applications to eclogitic rocks. <i>American Mineralogist</i> , <b>2007</b> , 92, 1181-1189	2.9	409
62	A new thermodynamic model for clino- and orthoamphiboles in the system $Na_2O-K_2O-FeO-MgO-Al_2O_3-SiO_2-H_2O$ . <i>Journal of Metamorphic Geology</i> , <b>2007</b> , 25, 631-656	4.4	386
61	Relating formulations of the thermodynamics of mineral solid solutions; activity modeling of pyroxenes, amphiboles, and micas. <i>American Mineralogist</i> , <b>1999</b> , 84, 1-14	2.9	369
60	On thermobarometry. <i>Journal of Metamorphic Geology</i> , <b>2008</b> , 26, 155-179	4.4	362
59	Thermodynamics of order-disorder in minerals; II, Symmetric formalism applied to solid solutions. <i>American Mineralogist</i> , <b>1996</b> , 81, 1425-1437	2.9	314
58	Melt loss and the preservation of granulite facies mineral assemblages. <i>Journal of Metamorphic Geology</i> , <b>2002</b> , 20, 621-632	4.4	265

57	The effect of Mn on mineral stability in metapelites. <i>Journal of Metamorphic Geology</i> , <b>1997</b> , 15, 223-238	4.4	242
56	The effect of Mn on mineral stability in metapelites revisited: new $a_{\text{Mn}}$ relations for manganese-bearing minerals. <i>Journal of Metamorphic Geology</i> , <b>2014</b> , 32, 809-828	4.4	236
55	A thermodynamic model for Ca-Na clin amphiboles in $\text{Na}_2\text{O}-\text{CaO}-\text{FeO}-\text{MgO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}$ for petrological calculations. <i>Journal of Metamorphic Geology</i> , <b>2005</b> , 23, 771-791	4.4	228
54	Spatially-focussed melt formation in aluminous metapelites from Broken Hill, Australia. <i>Journal of Metamorphic Geology</i> , <b>2005</b> , 22, 825-845	4.4	196
53	Revised activity-composition models for clinopyroxene and amphibole. <i>Journal of Metamorphic Geology</i> , <b>2012</b> , 30, 131-142	4.4	193
52	H <sub>2</sub> O in metamorphism and unexpected behaviour in the preservation of metamorphic mineral assemblages. <i>Journal of Metamorphic Geology</i> , <b>2001</b> , 19, 445-454	4.4	193
51	An internally consistent thermodynamic dataset with uncertainties and correlations: 1. Methods and a worked example. <i>Journal of Metamorphic Geology</i> , <b>1985</b> , 3, 327-342	4.4	178
50	An internally consistent thermodynamic dataset with uncertainties and correlations: 2. Data and results. <i>Journal of Metamorphic Geology</i> , <b>1985</b> , 3, 343-370	4.4	166
49	Progress in linking accessory mineral growth and breakdown to major mineral evolution in metamorphic rocks: a thermodynamic approach in the $\text{Na}_2\text{O}-\text{CaO}-\text{K}_2\text{O}-\text{FeO}-\text{MgO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}-\text{TiO}_2-\text{ZrO}_2$ system. <i>Journal of Metamorphic Geology</i> , <b>2011</b> , 29, 151-166	4.4	151
48	Metamorphism in Archaean greenstone belts: calculated fluid compositions and implications for gold mineralization. <i>Journal of Metamorphic Geology</i> , <b>1991</b> , 9, 141-150	4.4	148
47	Some remarks on high-temperature-low-pressure metamorphism in convergent orogens. <i>Journal of Metamorphic Geology</i> , <b>1991</b> , 9, 333-340	4.4	131
46	Phase relations in high-pressure metapelites in the system KFMASH ( $\text{K}_2\text{O}-\text{FeO}-\text{MgO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}$ ) with application to natural rocks. <i>Contributions To Mineralogy and Petrology</i> , <b>2003</b> , 145, 301-315	3.5	115
45	TRUTH AND BEAUTY IN METAMORPHIC PHASE-EQUILIBRIA: CONJUGATE VARIABLES AND PHASE DIAGRAMS. <i>Canadian Mineralogist</i> , <b>2005</b> , 43, 21-33	0.7	100
44	Retrograde melt-residue interaction and the formation of near-anhydrous leucosomes in migmatites. <i>Journal of Metamorphic Geology</i> , <b>2010</b> , 28, 579-597	4.4	96
43	Calculated phase equilibria involving chemical potentials to investigate the textural evolution of metamorphic rocks. <i>Journal of Metamorphic Geology</i> , <b>2008</b> , 26, 181-198	4.4	86
42	Metamorphism in the Olary Block, South Australia: compression with cooling in a Proterozoic fold belt. <i>Journal of Metamorphic Geology</i> , <b>1987</b> , 5, 291-306	4.4	86
41	Low-pressure granulite facies metapelitic assemblages and corona textures from MacRobertson Land, east Antarctica: the importance of Fe <sub>2</sub> O <sub>3</sub> and TiO <sub>2</sub> in accounting for spinel-bearing assemblages. <i>Journal of Metamorphic Geology</i> , <b>1989</b> , 7, 323-335	4.4	82
40	Calcite-dolomite geothermometry in the system $\text{CaCO}_3-\text{MgCO}_3-\text{FeCO}_3$ : an experimental study. <i>Journal of Metamorphic Geology</i> , <b>1984</b> , 2, 33-41	4.4	81

- 39 Calculated mineral equilibria in the greenschist-blueschist-eclogite facies in  $\text{Na}_2\text{O}-\text{FeO}-\text{MgO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}$ . *Contributions To Mineralogy and Petrology*, **1990**, 104, 85-98 3.5 71
- 38 Metamorphic evolution of aluminous granulites from Labwor Hills, Uganda. *Contributions To Mineralogy and Petrology*, **1987**, 95, 217-225 3.5 69
- 37 (Th+U)-Pb monazite ages from Al-Mg-rich metapelites, Rauer Group, east Antarctica. *Contributions To Mineralogy and Petrology*, **2003**, 146, 326-340 3.5 67
- 36 Melting of Peridotites through to Granites: A Simple Thermodynamic Model in the System KNCFMASHTOCr. *Journal of Petrology*, **2018**, 59, 881-900 3.9 64
- 35 Ultrahigh-pressure garnet peridotites from the devolatilization of sea-floor hydrated ultramafic rocks. *Journal of Metamorphic Geology*, **2008**, 26, 695-716 4.4 63
- 34 On the interpretation of retrograde reaction textures in granulite facies rocks. *Journal of Metamorphic Geology*, **2011**, 29, 131-149 4.4 62
- 33 Improving isochron calculations with robust statistics and the bootstrap. *Chemical Geology*, **2002**, 185, 191-204 4.2 61
- 32 Decompressional coronas and symplectites in granulites of the Musgrave Complex, central Australia. *Journal of Metamorphic Geology*, **1991**, 9, 441-450 4.4 61
- 31 Garnet porphyroblast-bearing leucosomes in metapelites: mechanisms, phase diagrams, and an example from Broken Hill, Australia **1990**, 105-123 61
- 30 Grain-scale pressure variations and chemical equilibrium in high-grade metamorphic rocks. *Journal of Metamorphic Geology*, **2014**, 32, 195-207 4.4 59
- 29 Thermodynamics of order-disorder in minerals; I, Symmetric formalism applied to minerals of fixed composition. *American Mineralogist*, **1996**, 81, 1413-1424 2.9 57
- 28 Thermal and baric evolution of garnet granulites from Sri Lanka. *Journal of Metamorphic Geology*, **1988**, 6, 351-364 4.4 54
- 27 A new thermodynamic model for sapphirine: calculated phase equilibria in  $\text{K}_2\text{O}-\text{FeO}-\text{MgO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}-\text{TiO}_2-\text{Fe}_2\text{O}_3$ . *Journal of Metamorphic Geology*, **2014**, 32, 287-299 4.4 50
- 26 Using equilibrium thermodynamics in the study of metasomatic alteration, illustrated by an application to serpentinites. *Lithos*, **2013**, 168-169, 67-84 2.9 48
- 25 The stability of sapphirine + quartz: calculated phase equilibria in  $\text{FeO}-\text{MgO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{TiO}_2$ . *Journal of Metamorphic Geology*, **2010**, 28, 615-633 4.4 48
- 24 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 3.9 48
- 23 On parameterizing thermodynamic descriptions of minerals for petrological calculations. *Journal of Metamorphic Geology*, **2014**, 32, 245-260 4.4 47
- 22 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 4.4 47

21	Metapelitic granulites from Jetty Peninsula, east Antarctica: formation during a single event or by polymetamorphism?. <i>Journal of Metamorphic Geology</i> , <b>1994</b> , 12, 557-573	4.4	45
20	Using calculated chemical potential relationships to account for coronas around kyanite: an example from the Bohemian Massif. <i>Journal of Metamorphic Geology</i> , <b>2010</b> , 28, 97-116	4.4	44
19	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> , <b>1991</b> , 9, 267-281	4.4	38
18	A calculated petrogenetic grid for ultramafic rocks in the system CaO-FeO-MgO-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -CO <sub>2</sub> -H <sub>2</sub> O at low pressures. <i>Contributions To Mineralogy and Petrology</i> , <b>1990</b> , 105, 347-358	3.5	37
17	The effect of subduction on the sulphur, carbon and redox budget of lithospheric mantle. <i>Journal of Metamorphic Geology</i> , <b>2015</b> , 33, 649-670	4.4	35
16	Using calculated chemical potential relationships to account for replacement of kyanite by symplectite in high pressure granulites. <i>Journal of Metamorphic Geology</i> , <b>2015</b> , 33, 311-330	4.4	35
15	Did the Delamerian Orogeny Start in the Neoproterozoic?. <i>Journal of Geology</i> , <b>2009</b> , 117, 575-583	2	29
14	Hydration of orthopyroxene-ferrosilite-bearing assemblages at Laouni, Central Hoggar, Algeria. <i>Journal of Metamorphic Geology</i> , <b>1996</b> , 14, 467-476	4.4	25
13	Viscous relaxation of grain-scale pressure variations. <i>Journal of Metamorphic Geology</i> , <b>2015</b> , 33, 859-868	4.4	24
12	Garnet and spinel lherzolite assemblages in MgO-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> and CaO-MgO-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> : thermodynamic models and an experimental conflict. <i>Journal of Metamorphic Geology</i> , <b>2012</b> , 30, 561-577	4.4	24
11	Evidence for a Variscan suture zone in the Vendée, France: a petrological study of blueschist facies rocks from Bois de Cenon. <i>Journal of Metamorphic Geology</i> , <b>1987</b> , 5, 225-237	4.4	24
10	On equilibrium in non-hydrostatic metamorphic systems. <i>Journal of Metamorphic Geology</i> , <b>2018</b> , 36, 419-438	4.3	21
9	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> , <b>2006</b> , 70, 5488-5506	5.5	19
8	Corona textures between kyanite, garnet and gedrite in gneisses from Errabiddy, Western Australia. <i>Journal of Metamorphic Geology</i> , <b>1987</b> , 5, 357-370	4.4	15
7	Intermediate granulite produced by transformation of eclogite at a felsic granulite contact, in Blanský les, Bohemian Massif. <i>Journal of Metamorphic Geology</i> , <b>2014</b> , 32, 347-370	4.4	13
6	The truth and beauty of chemical potentials. <i>Journal of Metamorphic Geology</i> , <b>2019</b> , 37, 1007-1019	4.4	12
5	How well known are the thermodynamics of Fe-Mg-Ca garnet? Evidence from experimentally determined exchange equilibria. <i>Journal of Metamorphic Geology</i> , <b>2004</b> , 14, 75-84	4.4	10
4	Robust isochron calculation. <i>Geochronology</i> , <b>2020</b> , 2, 325-342	3.8	6

3	Thermodynamics of Complex Phases <b>1983</b> , 241-266		3
2	Mantle-like HfNd isotope signatures in ~3.5 Ga greenstones: No evidence for Hadean crust beneath the East Pilbara Craton. <i>Chemical Geology</i> , <b>2021</b> , 576, 120273	4.2	2
1	Matrix analysis of metamorphic mineral assemblages and reactions: alternatives and extensions. <i>Contributions To Mineralogy and Petrology</i> , <b>1990</b> , 106, 61-65	3.5	1