Brian F Woodfield

List of Publications by Year
in descending order

115 papers	4,028 citations	147801 31 h-index	133252 59 g-index
116 all docs	116 docs citations	116 times ranked	4663 citing authors

#	Article	IF	Citations
1	Cryogenic heat capacity measurements and thermodynamic analysis of lithium aluminum layered double hydroxides (LDHs) with intercalated chloride. American Mineralogist, 2022, 107, 709-715.	1.9	6
2	Heat capacity and thermodynamic functions of partially dehydrated cation-exchanged (Na+, Cs+, Cd2+,) Tj ETQq0 0 0 rgBT /Overlock 10	2.0	6
3	Application of advanced thermal analysis for characterization of crystalline and amorphous phases of carvedilol. Journal of Pharmaceutical and Biomedical Analysis, 2022, 217, 114822.	2.8	4
4	The low-temperature heat capacity and thermodynamic properties of greigite (Fe3S4). Journal of Chemical Thermodynamics, 2022, 173, 106836.	2.0	2
5	Normal state specific heat of a core-shell aluminum-alumina metamaterial composite with enhanced Tc. Physical Review B, 2021, 103, .	3.2	3
6	Transformation of matter in living organisms during growth and evolution. Biophysical Chemistry, 2021, 271, 106550.	2.8	16
7	Heat capacities and thermodynamic functions of neodymia and samaria doped ceria. Journal of Chemical Thermodynamics, 2021, 158, 106454.	2.0	1
8	Heat capacity and thermodynamic functions of partially dehydrated sodium and zinc zeolite A (LTA). American Mineralogist, 2021, 106, 1341-1348.	1.9	2
9	Heat capacity and thermodynamic functions of transition metal ion (Cu2+, Fe2+, Mn2+) exchanged, partially dehydrated zeolite A (LTA). Journal of Chemical Thermodynamics, 2021, 161, 106556.	2.0	5
10	The effects of doping alumina with silica in alumina-supported NiO catalysts for oxidative dehydrogenation of ethane. Microporous and Mesoporous Materials, 2020, 293, 109799.	4.4	15
11	Standard methods for heat capacity measurements on a Quantum Design Physical Property Measurement System. Journal of Chemical Thermodynamics, 2020, 141, 105974.	2.0	25
12	Extended temperature regions of multiferroicity in nanoscale CuO. Journal of Chemical Thermodynamics, 2020, 142, 106012.	2.0	4
13	Thermodynamic Evidence of Structural Transformations in CO₂-Loaded Metalâ€“Organic Framework Zn(Melm)₂ from Heat Capacity Measurements. Journal of the American Chemical Society, 2020, 142, 4833-4841.	13.7	22
14	Quantifying oxygen vacancies in neodymium and samarium doped ceria from heat capacity measurements. Acta Materialia, 2020, 188, 740-744.	7.9	9
15	Thermodynamics of hydrolysis of cellulose to glucose from 0 to 100â€Â°C: Cellulosic biofuel applications and climate change implications. Journal of Chemical Thermodynamics, 2019, 128, 244-250.	2.0	13
16	Heat capacities, entropies, and Gibbs free energies of formation of low-k amorphous Si(O)CH dielectric films and implications for stability during processing. Journal of Chemical Thermodynamics, 2019, 128, 320-335.	2.0	5
17	Energetics of porous amorphous low-k SiOCH dielectric films. Journal of Chemical Thermodynamics, 2019, 139, 105885.	2.0	3
18	Low-temperature heat capacity measurements on insulating powders sealed under pressure. Journal of Chemical Thermodynamics, 2019, 136, 170-179.	2.0	12

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19	Heat capacity and thermodynamic functions of crystalline forms of the metal-organic framework zinc 2-methylimidazolate, Zn(MeIm)2. Journal of Chemical Thermodynamics, 2019, 136, 160-169.	2.0	11
20	New Insights about CuO Nanoparticles from Inelastic Neutron Scattering. Nanomaterials, 2019, 9, 312.	4.1	3
21	Thermal and hydrothermal stability of pure and silica-doped mesoporous aluminas. Microporous and Mesoporous Materials, 2019, 284, 60-68.	4.4	24
22	Review of surface water interactions with metal oxide nanoparticles. Journal of Materials Research, 2019, 34, 416-427.	2.6	21
23	Heat capacities and thermodynamic functions of the ZIF organic linkers imidazole, 2-methylimidazole, and 2-ethylimidazole. Journal of Chemical Thermodynamics, 2019, 132, 129-141.	2.0	8
24	Heat capacity and thermodynamic functions of Î³-Al2O3 synthesized from Al(NO3)3. Journal of Chemical Thermodynamics, 2019, 132, 295-305.	2.0	6
25	Thermodynamics of amorphous SiN(O)H dielectric films synthesized by plasmaâ€enhanced chemical vapor deposition. Journal of the American Ceramic Society, 2018, 101, 2017-2027.	3.8	4
26	Effects of Ag promotion and preparation method on cobalt Fischer-Tropsch catalysts supported on silica-modified alumina. Journal of Catalysis, 2018, 362, 118-128.	6.2	16
27	Effect of different alumina supports on performance of cobalt Fischer-Tropsch catalysts. Journal of Catalysis, 2018, 359, 92-100.	6.2	57
28	Heat capacity and thermodynamic functions of silica-doped Î³-Al2O3. Journal of Chemical Thermodynamics, 2018, 118, 165-174.	2.0	11
29	Experimental heat capacities, excess entropies, and magnetic properties of bulk and nano Fe3O4-Co3O4 and Fe3O4-Mn3O4 spinel solid solutions. Journal of Solid State Chemistry, 2018, 259, 79-90.	2.9	5
30	Heat capacity and thermodynamic functions of crystalline and amorphous forms of the metal organic framework zinc 2-ethylimidazolate, Zn(EtIm)2. Journal of Chemical Thermodynamics, 2018, 116, 341-351.	2.0	19
31	Heat capacity and thermodynamic functions of boehmite (AlOOH) and silica-doped boehmite. Journal of Chemical Thermodynamics, 2018, 118, 338-345.	2.0	14
32	Heat Capacity. Encyclopedia of Earth Sciences Series, 2018, , 1-4.	0.1	0
33	Heat Capacity. Encyclopedia of Earth Sciences Series, 2018, , 649-652.	0.1	0
34	Heat capacity and thermodynamic functions of Î³-Al2O3. Journal of Chemical Thermodynamics, 2017, 112, 77-85.	2.0	27
35	Low temperature heat capacity and thermodynamic functions of anion bearing sodalites Na8Al6Si6O24X2 (X = SO4, ReO4, Cl, I). Journal of Chemical Thermodynamics, 2017, 114, 14-24.	2.0	8
36	Structure and Thermochemistry of Perrhenate Sodalite and Mixed Guest Perrhenate/Pertechnetate Sodalite. Environmental Science & Technology, 2017, 51, 997-1006.	10.0	19

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37	Effect of Drying Temperature on Iron Fischer-Tropsch Catalysts Prepared by Solvent Deficient Precipitation. Journal of Nanomaterials, 2017, 2017, 1-11.	2.7	4
38	Practical comparison of traditional and definitive screening designs in chemical process development. International Journal of Experimental Design and Process Optimisation, 2016, 5, 1.	0.2	2
39	Synthesis and characterization of silica doped alumina catalyst support with superior thermal stability and unique pore properties. Journal of Porous Materials, 2016, 23, 475-487.	2.6	52
40	Heat capacities, standard entropies and Gibbs energies of Sr-, Rb- and Cs-substituted barium aluminotitanate hollandites. Journal of Chemical Thermodynamics, 2016, 93, 1-7.	2.0	20
41	Lattice vacancies responsible for the linear dependence of the low-temperature heat capacity of insulating materials. Physical Review B, 2015, 91, .	3.2	53
42	Iron Fischer-Tropsch Catalysts Prepared by Solvent-Deficient Precipitation (SDP): Effects of Washing, Promoter Addition Step, and Drying Temperature. Catalysts, 2015, 5, 1352-1374.	3.5	9
43	Preparation of an Unsupported Iron Fischerâ€“Tropsch Catalyst by a Simple, Novel, Solvent-Deficient Precipitation (SDP) Method. Energy & Fuels, 2015, 29, 1972-1977.	5.1	13
44	Heat capacities and thermodynamics of formation of flat-Al13 nitrate â€“ [Al13(OH)24(H2O)24](NO3)15Â·11H2O. Journal of Chemical Thermodynamics, 2015, 90, 224-231.	2.0	2
45	Thermodynamics of Fe₃O₄â€“Co₃O₄ and Fe₃O₄â€“Mn₃O₄ spinel solid solutions at the bulk and nanoscale. Physical Chemistry Chemical Physics, 2015, 17, 22286-22295.	2.8	21
46	Heat capacities and thermodynamics of formation of Îµ-Keggin MAl12 Selenates (M = Al(III), Ga(III), or) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.0	4
47	Determining the Location and Role of Al in Al-Modified TiO₂ Nanoparticles Using Low-Temperature Heat Capacity, Electron Energy-Loss Spectroscopy, and X-ray Diffraction. Journal of Physical Chemistry C, 2015, 119, 17867-17875.	3.1	4
48	Thermodynamic Properties of Î±-Fe₂O₃ and Fe₃O₄ Nanoparticles. Journal of Physical Chemistry C, 2015, 119, 9609-9616.	3.1	10
49	A statistical approach to control porosity in silica-doped alumina supports. Microporous and Mesoporous Materials, 2015, 210, 116-124.	4.4	7
50	La-Dopant Location in La-Doped Î³-Al₂O₃ Nanoparticles Synthesized Using a Novel One-Pot Process. Journal of Physical Chemistry C, 2015, 119, 25053-25062.	3.1	22
51	Development of a Debye heat capacity model for vibrational modes with a gap in the density of states. Journal of Physics Condensed Matter, 2015, 27, 285402.	1.8	26
52	Synthesis of metal oxide nanoparticles via a robust â€œsolvent-deficientâ€•method. Nanoscale, 2015, 7, 144-156.	5.6	45
53	A thermodynamic investigation of the cellulose allomorphs: Cellulose(am), cellulose IÎ²(cr), cellulose II(cr), and cellulose III(cr). Journal of Chemical Thermodynamics, 2015, 81, 184-226.	2.0	50
54	Heat capacity and thermodynamic functions of nano-TiO2 rutile in relation to bulk-TiO2 rutile. Journal of Chemical Thermodynamics, 2015, 81, 311-322.	2.0	31

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55	Heat capacity and thermodynamic functions of nano-TiO2 anatase in relation to bulk-TiO2 anatase. Journal of Chemical Thermodynamics, 2015, 81, 298-310.	2.0	25
56	Synthesis and Thermodynamics of Porous Metal Oxide Nanomaterials. Current Inorganic Chemistry, 2014, 4, 40-53.	0.2	7
57	One-pot Synthesis of Pt Catalysts Supported on Al-modified TiO2. Bulletin of Chemical Reaction Engineering and Catalysis, 2014, 9, .	1.1	0
58	Facile synthesis of mesoporous Î³-alumina with tunable pore size: The effects of water to aluminum molar ratio in hydrolysis of aluminum alkoxides. Microporous and Mesoporous Materials, 2014, 183, 37-47.	4.4	58
59	Improved calculations of pore size distribution for relatively large, irregular slit-shaped mesopore structure. Microporous and Mesoporous Materials, 2014, 184, 112-121.	4.4	75
60	Synthesis and characterization of pure and stabilized mesoporous anatase titanias. Microporous and Mesoporous Materials, 2014, 184, 7-14.	4.4	16
61	Optimizing the synthesis and properties of Al-modified anatase catalyst supports by statistical experimental design. Journal of Porous Materials, 2014, 21, 827-837.	2.6	9
62	Highly active and stable supported iron Fischerâ€“Tropsch catalysts: Effects of support properties and SiO2 stabilizer on catalyst performance. Journal of Catalysis, 2014, 319, 220-231.	6.2	32
63	Magnetic and Thermodynamic Properties of Nanosized Zn Ferrite with Normal Spinal Structure Synthesized Using a Facile Method. Inorganic Chemistry, 2014, 53, 10463-10470.	4.0	44
64	Structure Analysis of Al-Modified TiO₂ Nanocatalyst Supports. Journal of Physical Chemistry C, 2014, 118, 9176-9186.	3.1	6
65	Low temperature heat capacity study of Ba2TiSi2O8 and Sr2TiSi2O8. Journal of Chemical Thermodynamics, 2014, 72, 77-84.	2.0	31
66	Supported Iron Fischerâ€“Tropsch Catalyst: Superior Activity and Stability Using a Thermally Stable Silica-Doped Alumina Support. ACS Catalysis, 2014, 4, 1071-1077.	11.2	72
67	Acid site properties of thermally stable, silica-doped alumina as a function of silica/alumina ratio and calcination temperature. Applied Catalysis A: General, 2014, 482, 16-23.	4.3	29
68	Magneto-structural correlation and low temperature heat capacity of a Mn (III) quadridentate Schiff-base coordination compound. Journal of Chemical Thermodynamics, 2014, 74, 247-254.	2.0	10
69	Characterization of Surface Defect Sites on Bulk and Nanophase Anatase and Rutile TiO2 by Low-Temperature Specific Heat. Journal of Physical Chemistry C, 2013, 117, 4544-4550.	3.1	20
70	Facile structure-controlled synthesis of mesoporous Î³-alumina: Effects of alcohols in precursor formation and calcination. Microporous and Mesoporous Materials, 2013, 177, 37-46.	4.4	49
71	Inelastic neutron scattering studies of hydrated CuO, ZnO and CeO2 nanoparticles. Chemical Physics, 2013, 427, 66-70.	1.9	7
72	Generalized preparation method and characterization of aluminum isopropoxide, aluminum phenoxide, and aluminum n-hexyloxide. Polyhedron, 2013, 62, 18-25.	2.2	19

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73	Low temperature heat capacity Study of Fe(PO3)3 and Fe2P2O7. Journal of Chemical Thermodynamics, 2013, 61, 51-57.	2.0	31
74	Low temperature heat capacity study of FePO4 and Fe3(P2O7)2. Journal of Chemical Thermodynamics, 2013, 62, 35-42.	2.0	30
75	Low temperature heat capacity study of Fe3PO7 and Fe4(P2O7)3. Journal of Chemical Thermodynamics, 2013, 62, 86-91.	2.0	30
76	Thermodynamics of the basic copper sulfates antlerite, posnjakite, and brochantite. Chemie Der Erde, 2013, 73, 39-50.	2.0	47
77	Facile solvent-deficient synthesis of mesoporous Î³-alumina with controlled pore structures. Microporous and Mesoporous Materials, 2013, 165, 70-78.	4.4	90
78	Thermochemistry of Î±-D-xylose(cr). Journal of Chemical Thermodynamics, 2013, 58, 20-28.	2.0	22
79	Low temperature heat capacity of bulk and nanophase ZnO and Zn1â^'xCoxO wurtzite phases. Journal of Chemical Thermodynamics, 2013, 60, 191-196.	2.0	19
80	Phase Progression of Î³-Al₂O₃ Nanoparticles Synthesized in a Solvent-Deficient Environment. Inorganic Chemistry, 2013, 52, 4411-4423.	4.0	51
81	The thermodynamic properties of hydrated Î³-Al2O3 nanoparticles. Journal of Chemical Physics, 2013, 139, 244705.	3.0	16
82	Heat Capacity Studies of Surface Water Confined on Cassiterite (SnO₂) Nanoparticles. Journal of Physical Chemistry C, 2012, 116, 3910-3917.	3.1	26
83	Simple, inexpensive mass spectrometric analyzer for thermogravimetry. Rapid Communications in Mass Spectrometry, 2012, 26, 78-82.	1.5	5
84	Influence of Particle Size and Water Coverage on the Thermodynamic Properties of Water Confined on the Surface of SnO₂ Cassiterite Nanoparticles. Journal of Physical Chemistry C, 2011, 115, 21105-21112.	3.1	19
85	Heat capacity studies of the iron oxyhydroxides akaganÃ©ite (Î²-FeOOH) and lepidocrocite (Î³-FeOOH). Journal of Chemical Thermodynamics, 2011, 43, 190-199.	2.0	23
86	An improved technique for accurate heat capacity measurements on powdered samples using a commercial relaxation calorimeter. Journal of Chemical Thermodynamics, 2011, 43, 1263-1269.	2.0	108
87	Heat capacity of hafnia at low temperature. Journal of Chemical Thermodynamics, 2011, 43, 970-973.	2.0	19
88	Dynamics of Water Confined on the Surface of Titania and Cassiterite Nanoparticles. Materials Research Society Symposia Proceedings, 2011, 1352, 47.	0.1	3
89	Heat capacity, entropy, and magnetic properties of jarosite-group compounds. Physics and Chemistry of Minerals, 2010, 37, 635-651.	0.8	21
90	Heat capacity, third-law entropy, and low-temperature physical behavior of bulk hematite (Î±-Fe2O3). Journal of Chemical Thermodynamics, 2010, 42, 1136-1141.	2.0	24

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91	Accurate heat capacity measurements on powdered samples using a Quantum Design physical property measurement system. Journal of Chemical Thermodynamics, 2010, 42, 1107-1115.	2.0	122
92	Size-dependence of the heat capacity and thermodynamic properties of hematite (Î±-Fe2O3). Journal of Chemical Thermodynamics, 2010, 42, 1142-1151.	2.0	35
93	Heat Capacity Studies of Nanocrystalline Magnetite (Fe₃O₄). Journal of Physical Chemistry C, 2010, 114, 21100-21108.	3.1	44
94	Inelastic Neutron Scattering Study of Confined Surface Water on Rutile Nanoparticles. Journal of Physical Chemistry A, 2009, 113, 2796-2800.	2.5	49
95	Heat capacities and thermodynamic functions of TiO2 anatase and rutile: Analysis of phase stability. American Mineralogist, 2009, 94, 236-243.	1.9	213
96	Dynamics of Water Confined on a TiO₂ (Anatase) Surface. Journal of Physical Chemistry A, 2007, 111, 12584-12588.	2.5	54
97	Heat capacities and thermodynamic functions of hexagonal ice from T=0.5K to T=38K. Journal of Chemical Thermodynamics, 2007, 39, 712-716.	2.0	25
98	TiO2 Stability Landscape:â€‰ Polymorphism, Surface Energy, and Bound Water Energetics. Chemistry of Materials, 2006, 18, 6324-6332.	6.7	187
99	Surface Water and the Origin of the Positive Excess Specific Heat for 7 nm Rutile and Anatase Nanoparticles. Nano Letters, 2006, 6, 750-754.	9.1	66
100	Design and construction of an adiabatic calorimeter for samples of less than 1cm3 in the temperature range T=15K to T=350K. Journal of Chemical Thermodynamics, 2006, 38, 1655-1663.	2.0	52
101	Energy Crossovers in Nanocrystalline Zirconia. Journal of the American Ceramic Society, 2005, 88, 160-167.	3.8	252
102	Thermodynamics of monoclinic Fe2(SO4)3. Journal of Chemical Thermodynamics, 2005, 37, 802-809.	2.0	22
103	Neutron detection with cryogenics and semiconductors. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1592-1605.	0.8	22
104	High Purity Anatase TiO2Nanocrystals:Â Near Room-Temperature Synthesis, Grain Growth Kinetics, and Surface Hydration Chemistry. Journal of the American Chemical Society, 2005, 127, 8659-8666.	13.7	527
105	Heat capacities, third-law entropies and thermodynamic functions of the negative thermal expansion material Zn2GeO4 from T=(0 to 400) K. Journal of Chemical Thermodynamics, 2004, 36, 349-357.	2.0	48
106	Calorimetric Study:â€‰ Surface Energetics and the Magnetic Transition in Nanocrystalline CoO. Chemistry of Materials, 2004, 16, 5394-5400.	6.7	43
107	Evidence of linear lattice expansion and covalency enhancement in rutile TiO2 nanocrystals. Applied Physics Letters, 2004, 85, 2059-2061.	3.3	177
108	Thermodynamics of Fe oxides: Part I. Entropy at standard temperature and pressure and heat capacity of goethite (Î±-FeOOH), lepidocrocite (Î³-FeOOH), and maghemite (Î³-Fe₂O₃). American Mineralogist, 2003, 88, 846-854.	1.9	80

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109	The heat capacity of single-crystal AuZn near the martensitic transition. Journal of Chemical Thermodynamics, 2002, 34, 251-261.	2.0	24
110	The thermodynamics of formation, molar heat capacity, and thermodynamic functions ofZrTiO4(cr). Journal of Chemical Thermodynamics, 2001, 33, 165-178.	2.0	27
111	Molar heat capacities and thermodynamic functions of CaHf Ti2O7(cr) and CaZr0.26Hf0.74Ti2O7(cr). Journal of Chemical Thermodynamics, 2001, 33, 1441-1455.	2.0	3
112	Critical phenomena at the antiferromagnetic transition in MnO. Physical Review B, 1999, 60, 7335-7340.	3.2	15
113	Molar heat capacity and thermodynamic functions of the type II antiferromagnet MnO. Journal of Chemical Thermodynamics, 1999, 31, 725-739.	2.0	22
114	Thermochemistry of Hf-Zirconolite, CaHf Ti2O7. Materials Research Society Symposia Proceedings, 1999, 556, 11.	0.1	14
115	Calorimetric studies of the phase transition in iodoform. Canadian Journal of Chemistry, 1988, 66, 645-650.	1.1	31